AMERICAN FABRICS

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. . . dedicated to the belief that Fashion begins with the Fabric . . . that the American textile industry casts a major influence on the economic and social aspects of the world in which we live . . . that American textiledom has deservedly attained the world's pinnacle from which it can never be dislodged. To all who work within or with the industry this tenth volume of American Fabrics is offered as a measure of help, of service . . .

and, we hope, of inspiration.

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AMERICAN FABRICS, Empire State Bldg., New York 1, New York

Number Ten 2nd Quarter 1949

Fashion Begins with the Fabric

American Fabrics

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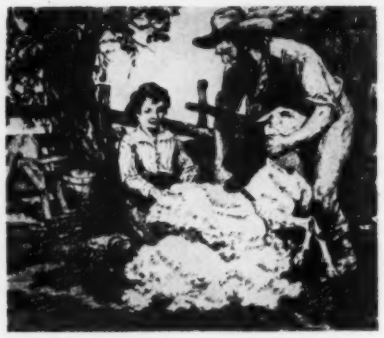

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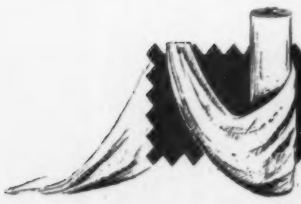

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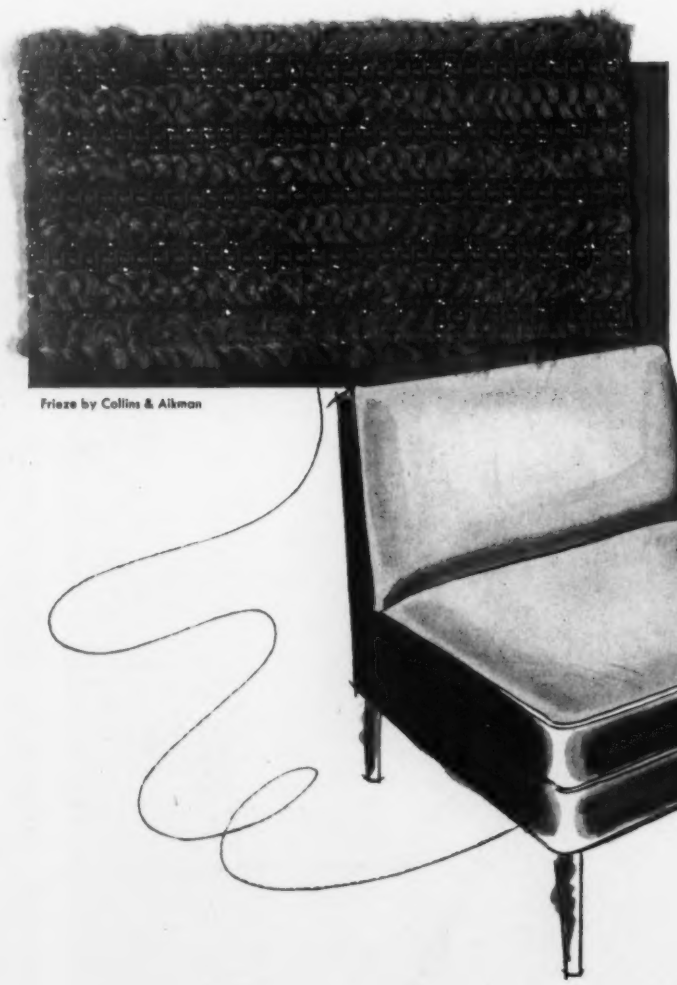

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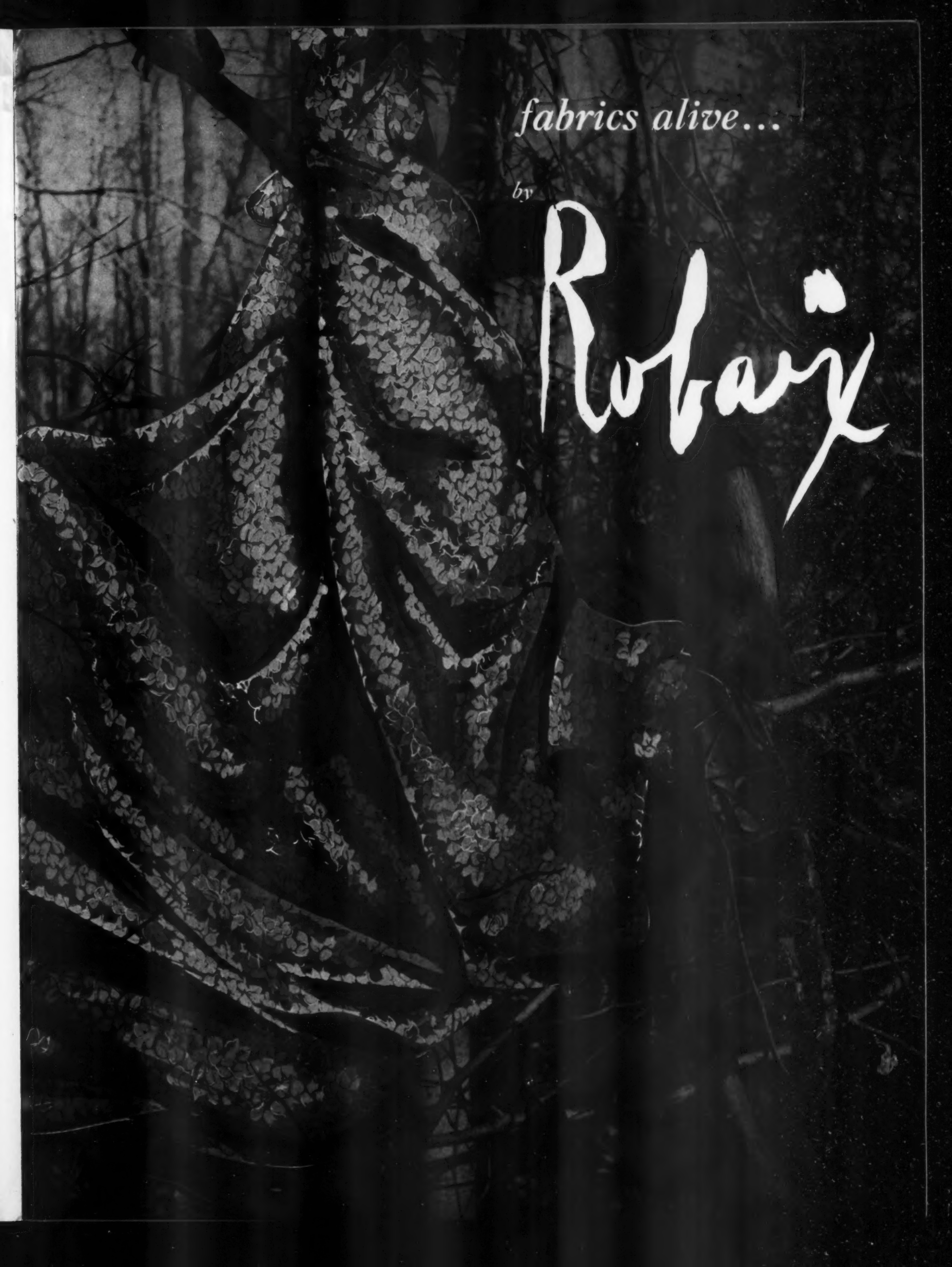
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it's vat-dyed, guaranteed washable, shrink-proof, sunfast, [illegible]spiration-resistant, wrinkle-resistant

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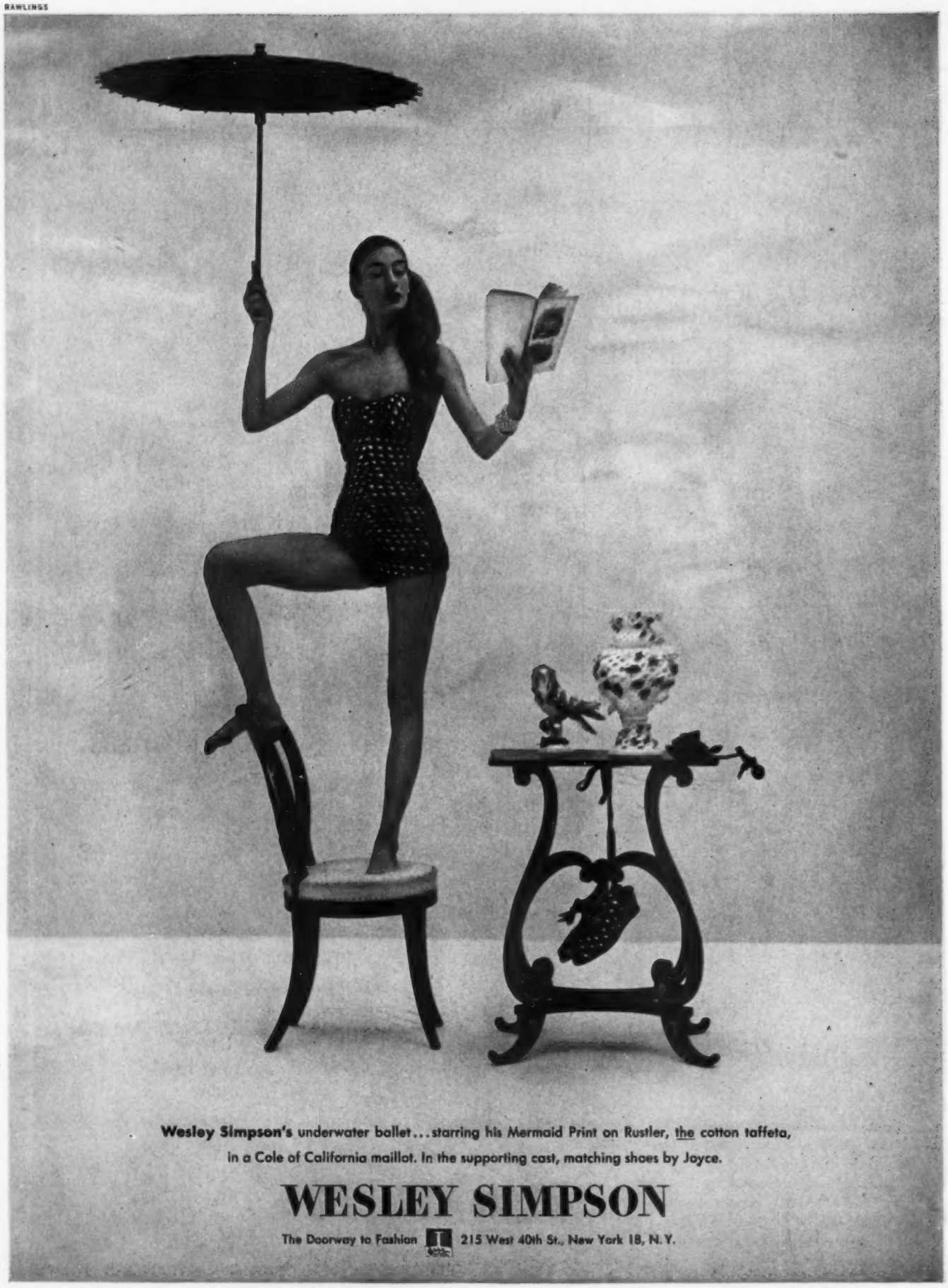
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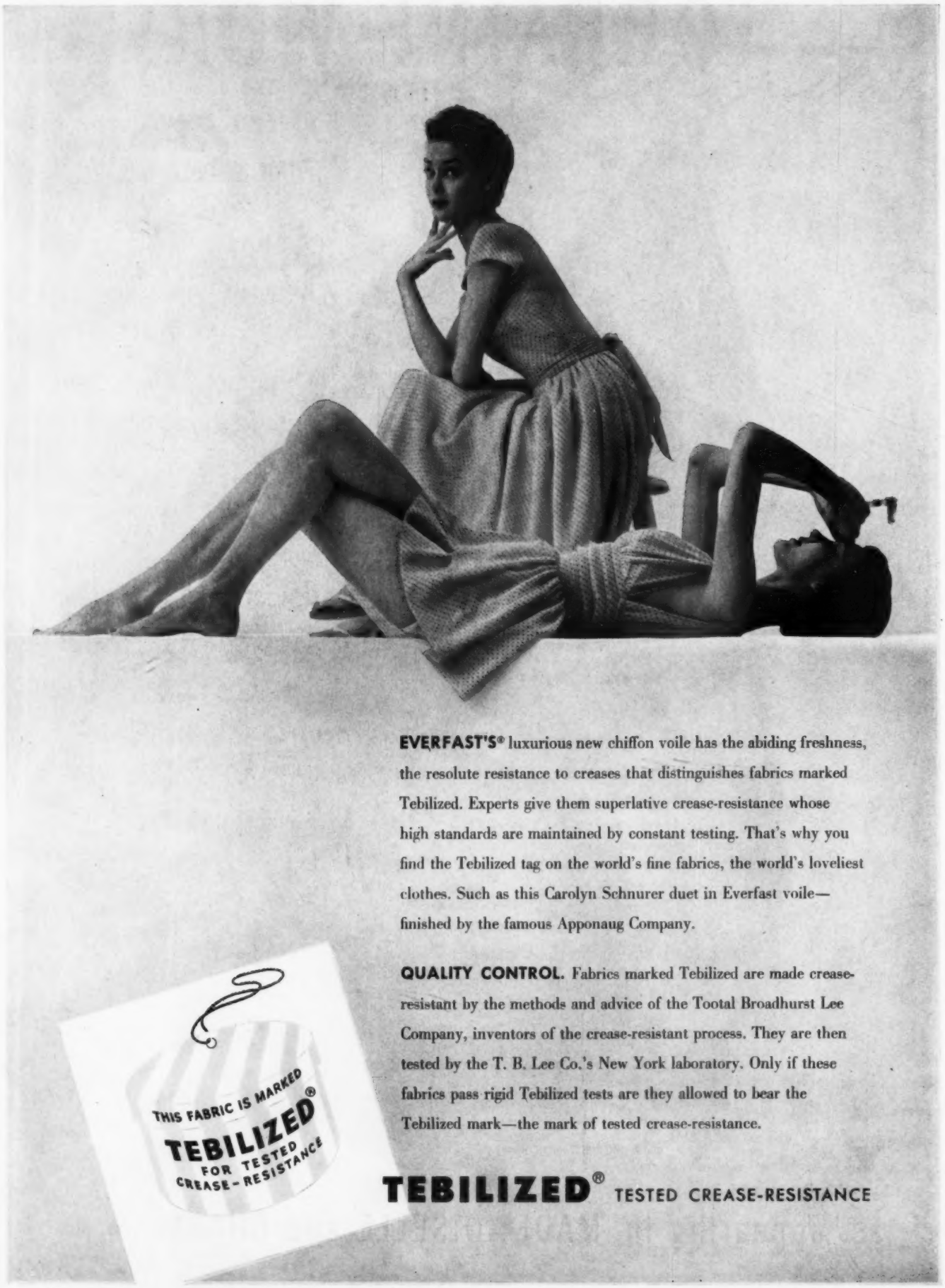

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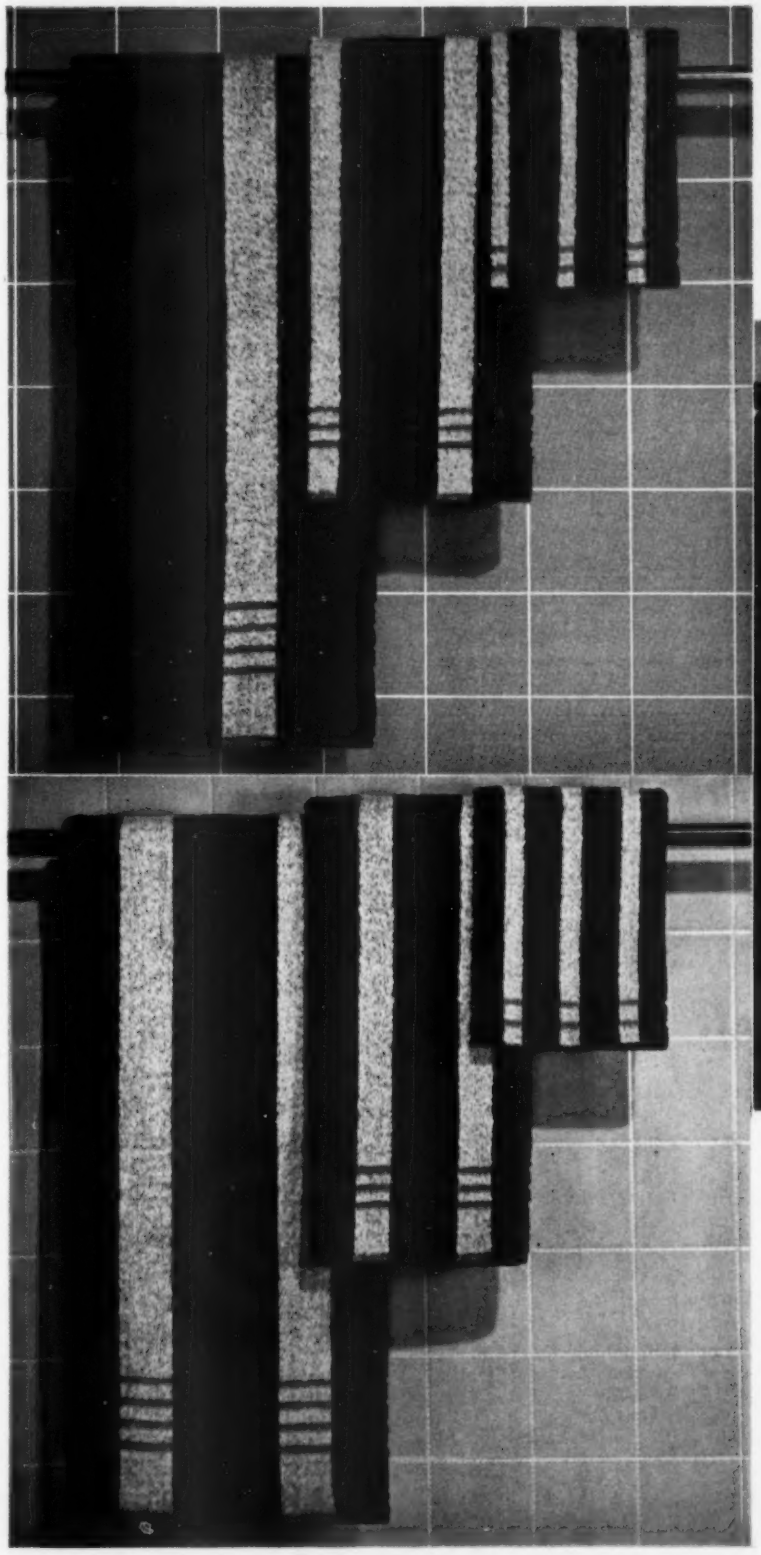

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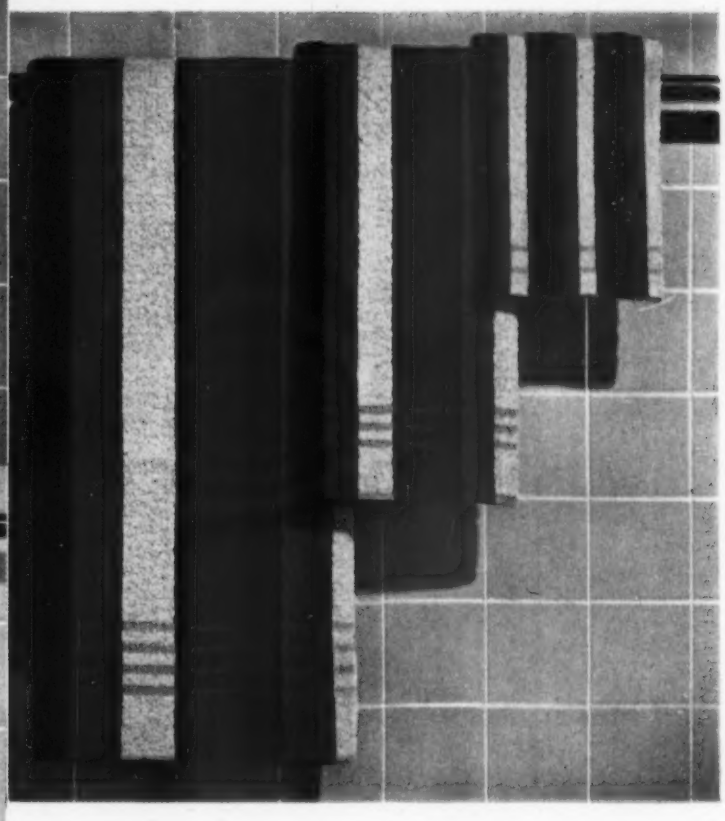

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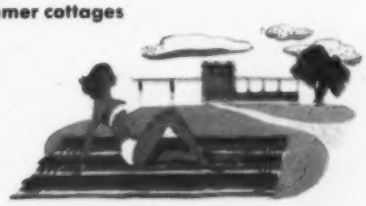

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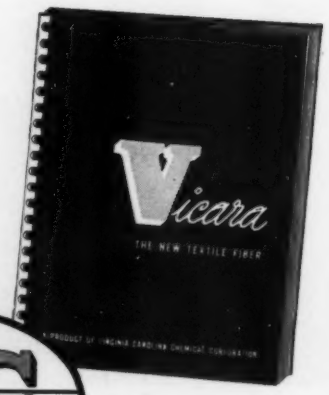

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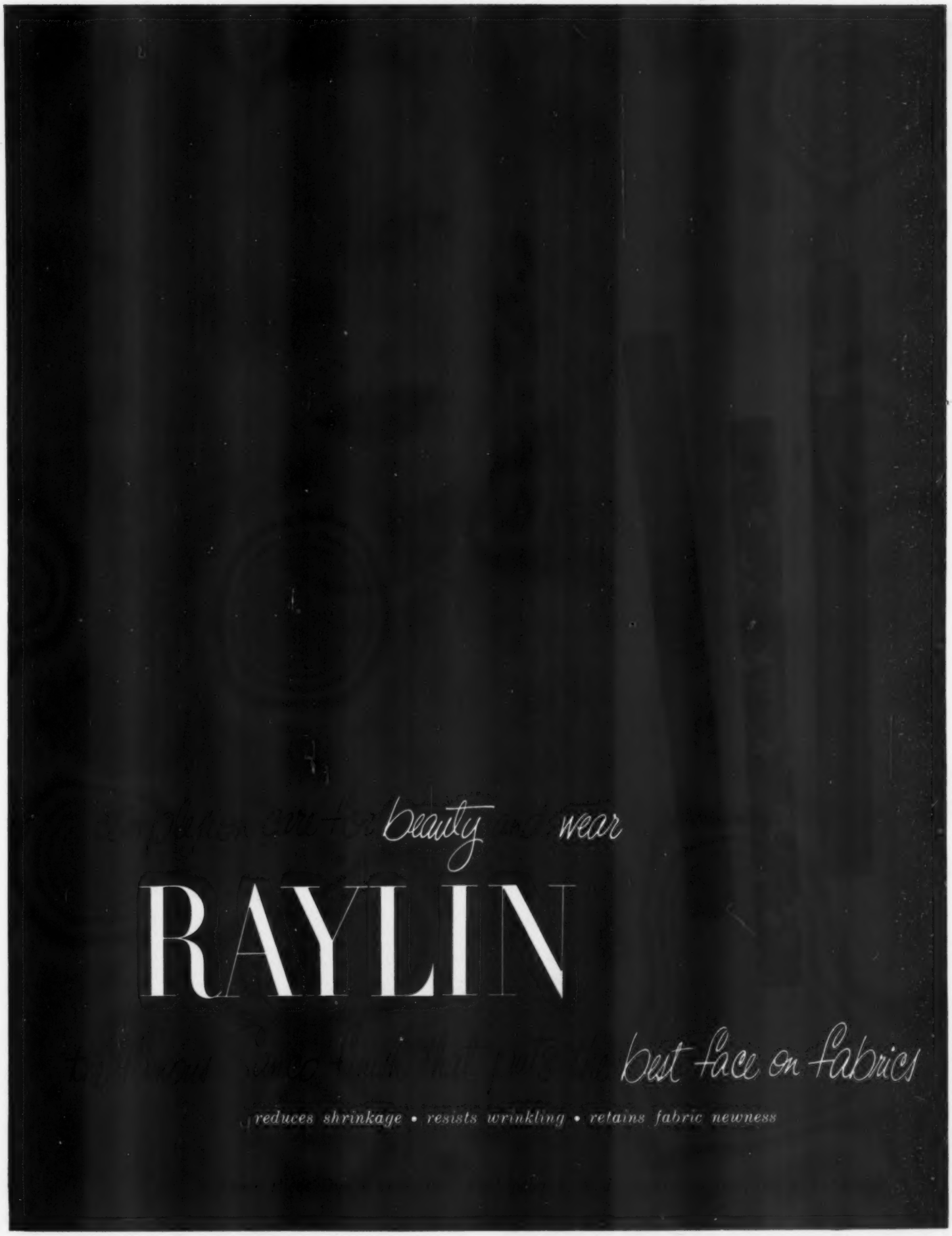
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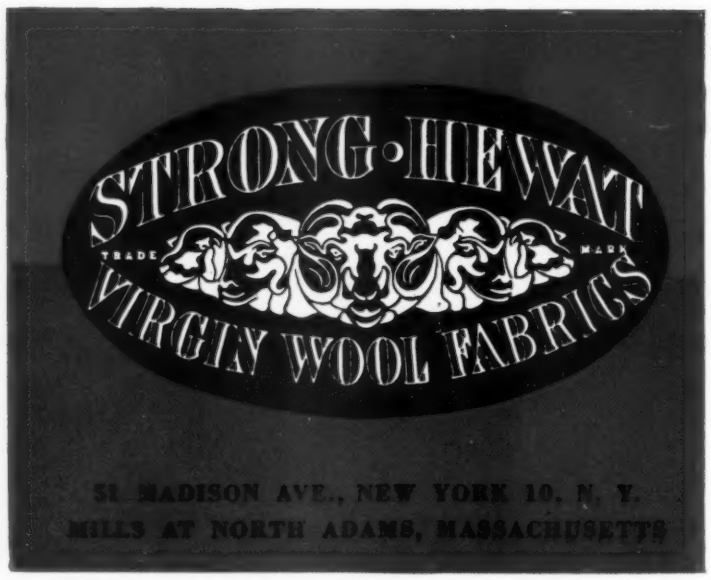
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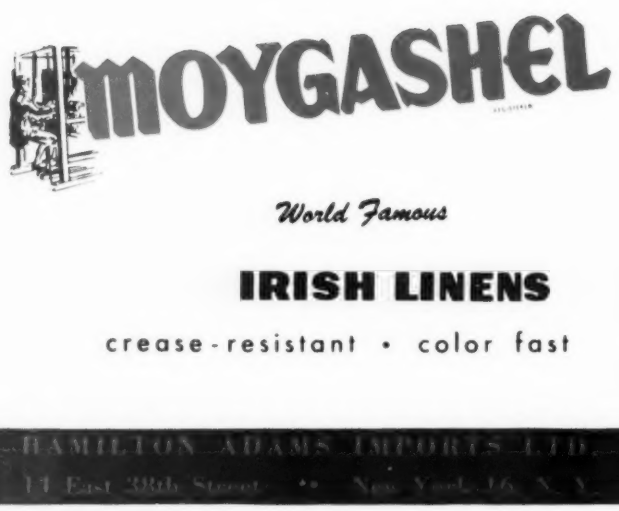
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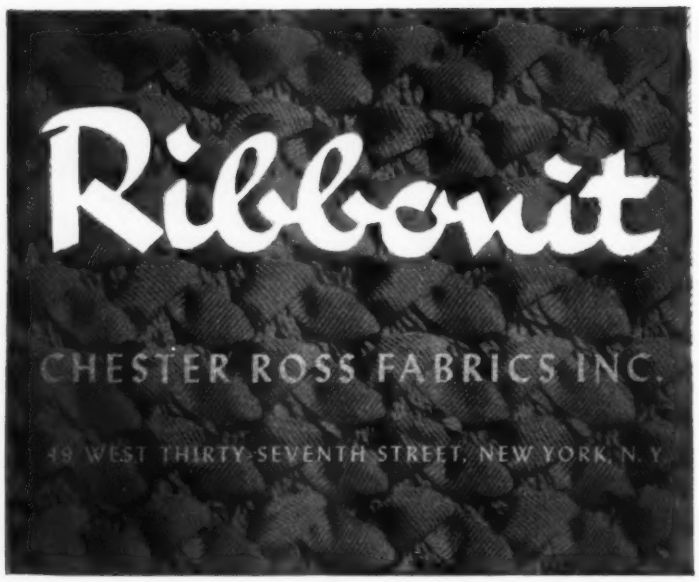
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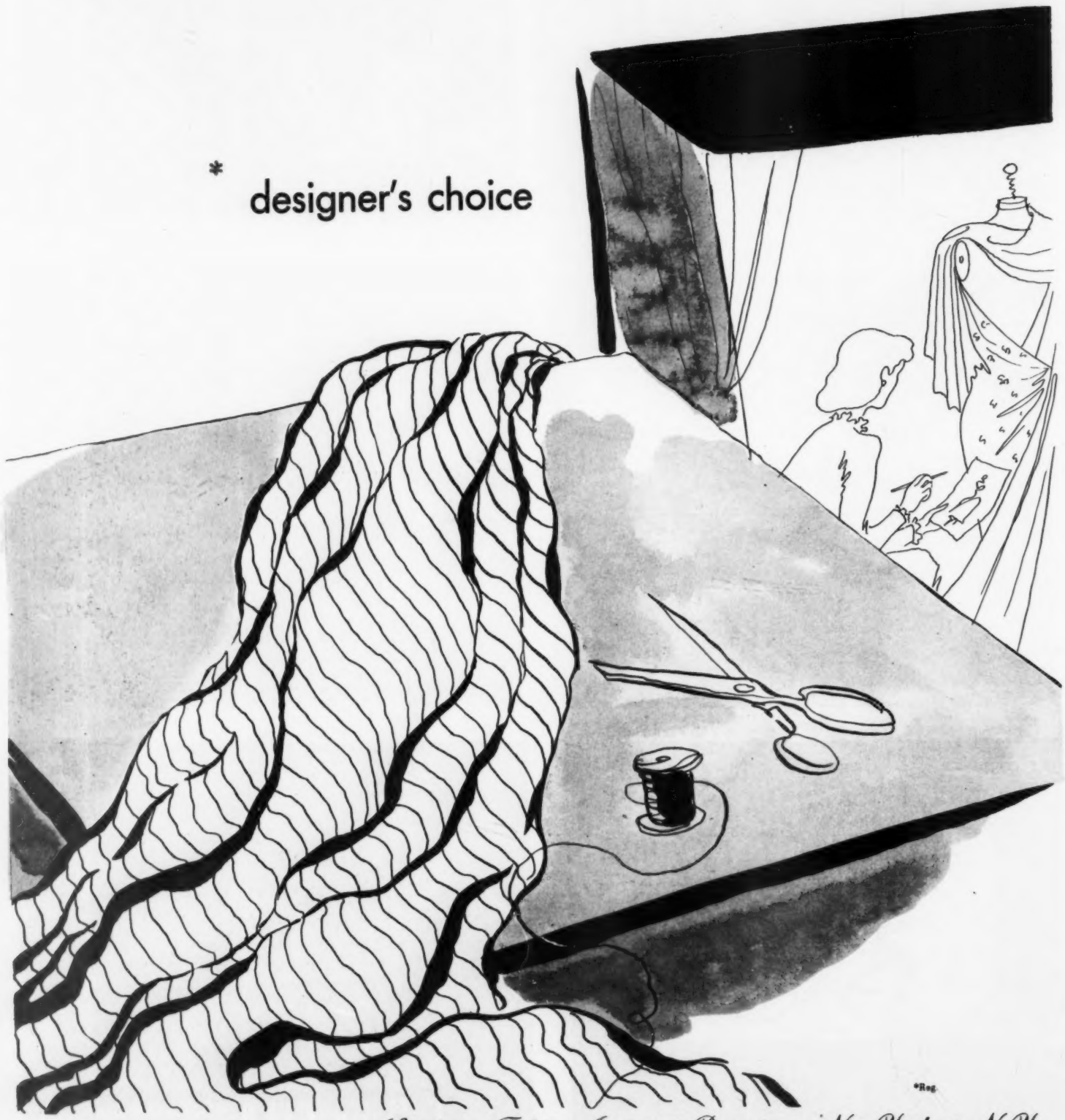

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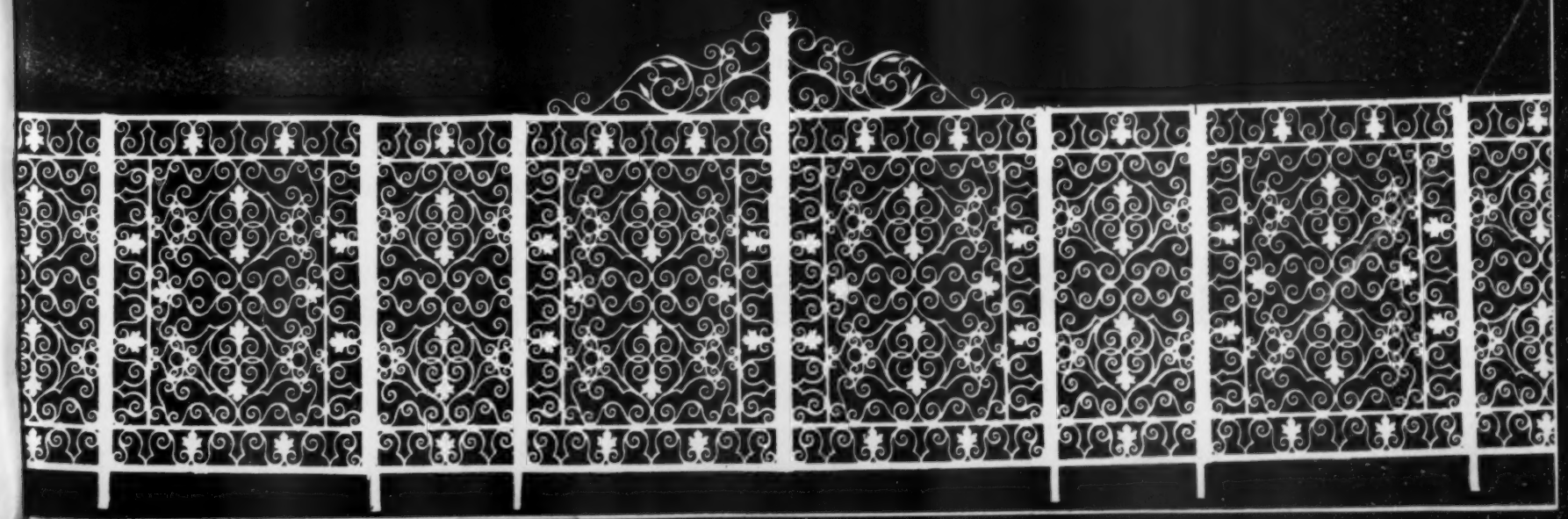

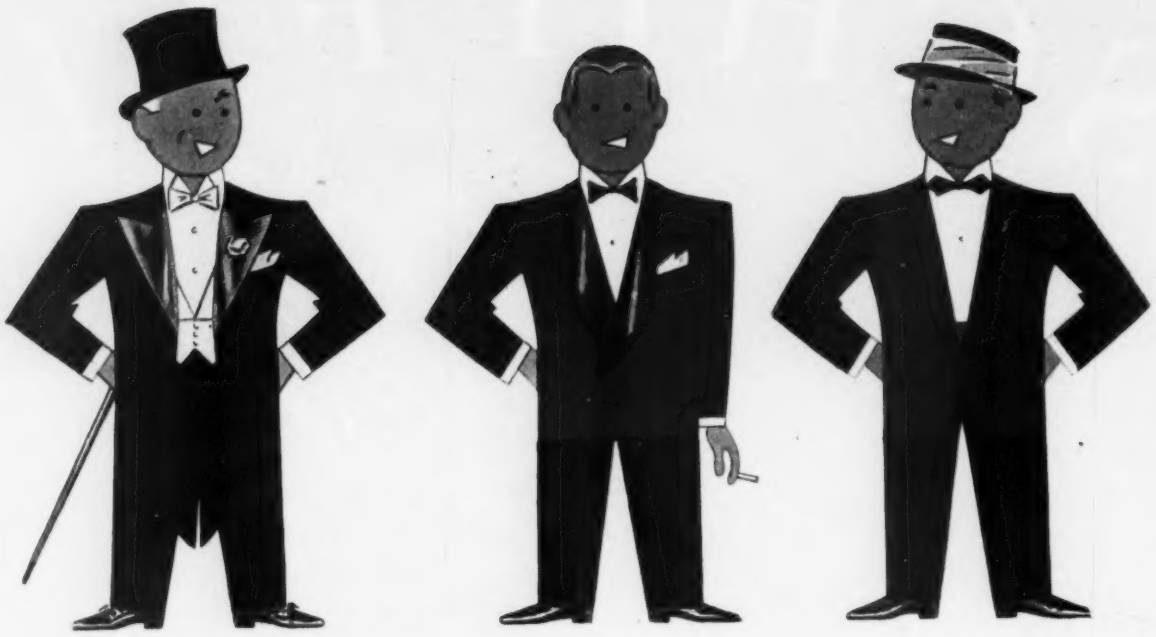

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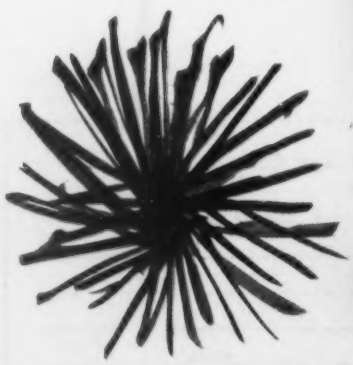

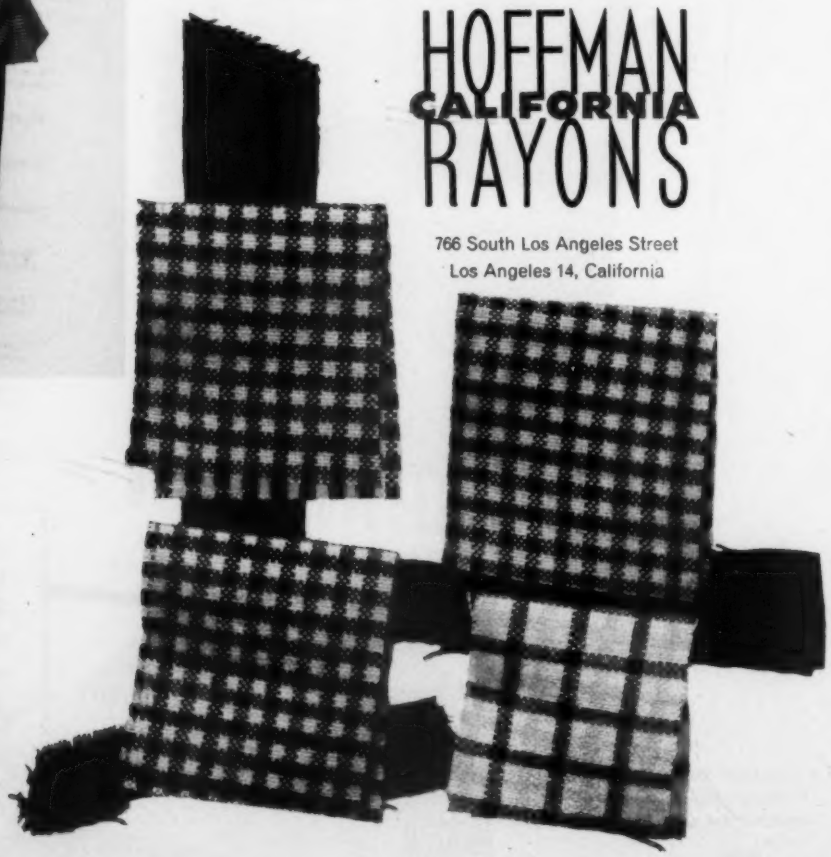

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DISTRICT

The history of these famous Checks is presented here as narrated by Mr. John McKay Adan to the editors of American Fabrics.

The development and fashion of the Scottish District Checks can be attributed, in large measure, to Queen Victoria. By her great esteem for the Scottish people, by her admiration of Scottish scenery and by her subsequent purchase of the Balmoral Estate, she led the vanguard in the creation of the great sporting estates which today control practically the entire Highlands of Scotland.

Since money in the Highlands has always been a scarce commodity, it became the custom on the estates to feed and clothe their gillies, game-keepers and foresters. Prince Albert, the husband of Queen Victoria was much concerned over the question of protective coloring for the employees on the Balmoral Estates. In addition, the clan spirit was still very much alive in the Highlands.

In time the District Checks of Scotland gave rise to a vogue which has grown from a protective colouring to a range of checks, plaids and colourings which are delightful as the native heather from which they spring. Scottish woolen designers performed a truly masterful work in developing these singularly beautiful effects.

The first collection of these patterns was made by Fraser and Smith of Inverness. When this concern ceased to exist in 1893, this part of their trade was handled by Messrs. George Harrison and Co., Ltd., of Edinburgh. Mr. George Harrison coined the term District Checks. Today the manufacture of these Checks is confined very largely to Messrs. A. and J. Macnab, Ltd., woolen manufacturers of Slateford in Midlothian. It is to this company that we are indebted for these superb examples of the Scottish woolen manufacturers' design and art.

The reader should be apprised that the prefix "Glen" is the Gaelic word for a valley; in addition, the prefix "Strath" is also a valley but implies a larger and more fertile valley. Because of the rugged terrain of the Scottish Highlands, the homes were largely established in the "Glens" and the "Straths." This is the reason for the use of these prefixes in the names of the District Checks. Incidentally, "Ben" is the Gaelic name for a mountain.

While the line of District Checks shown in this article does not claim to be entirely complete it does guarantee, however, the authenticity of the patterns. The historical notes used are based chiefly on information supplied by the "Scottish Woollens," published by the national Association of Scottish Woollen Manufacturers.

collection shown in U.S.A.

Authentic

CHECKS

The potential value of the Authentic District Checks in American Fabrics, from the viewpoint of the Maker and the Seller

It is rarely that the chainbelt of the American distribution system can be so richly lubricated as can be done with a properly formulated and adequately staged promotion of fashions based on Authentic Scottish District Checks. Particularly because the various elements of our economy are slowing down by the consumer's reluctance to maintain his spending pace, it is not only desirable but even essential that a new and different way of presenting merchandise be found to accelerate sharply the wheels of industry. In the opinion of the Editors of American Fabrics, a combined effort by the mills, the manufacturers and the retailers of apparel, well coordinated, can help to make Authentic District Checks a nationwide and truly important fashion which will move a quantity of goods.

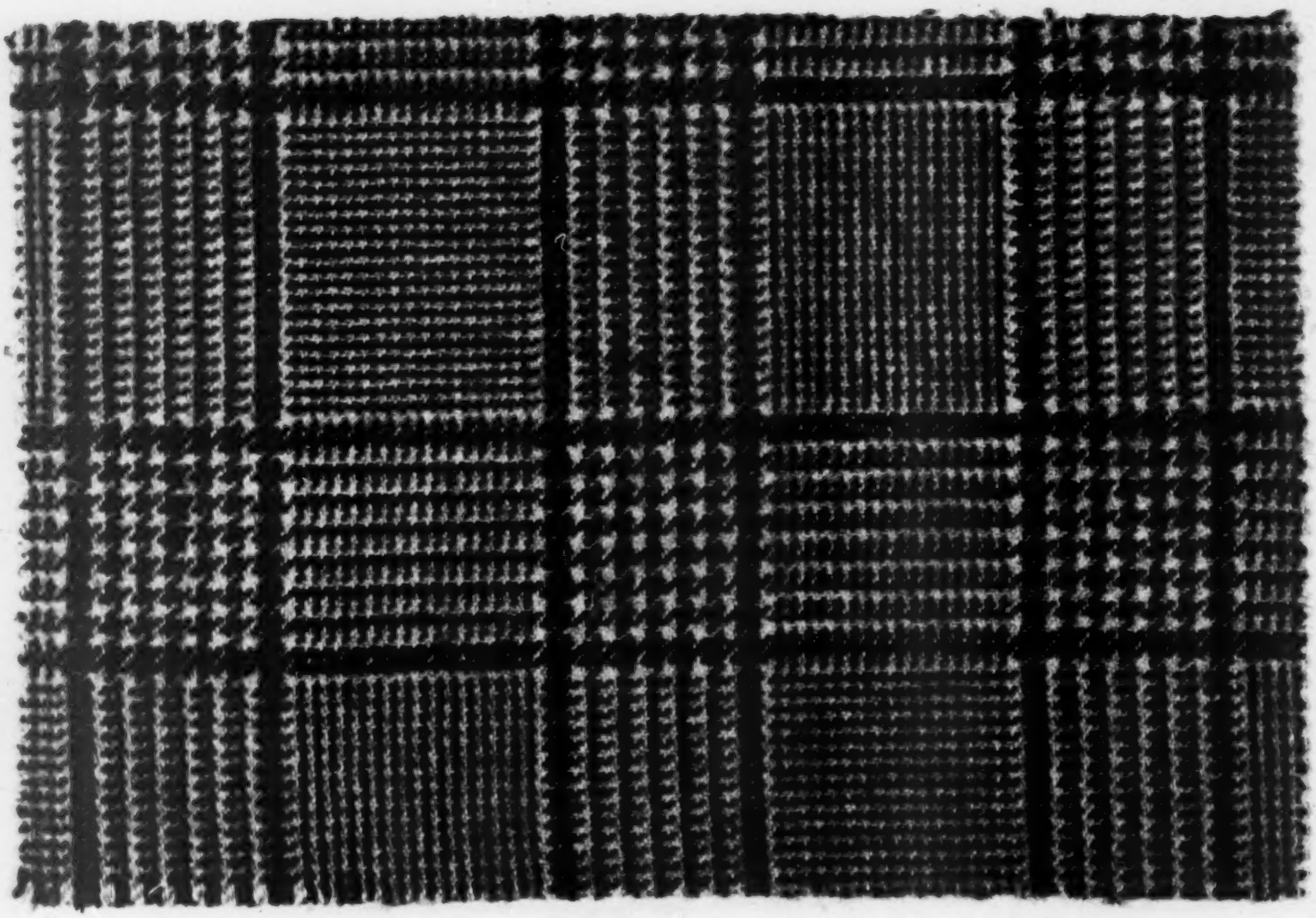
When we say the mill, we limit the reproduction of these Checks in no way. Based on our intimate knowledge of American technology, we are confident that our weavers of woolens, of rayons, of cottons and of silk can all reproduce the Checks with gratifying fidelity of color and clarity. We know the creative talents of our manufacturing industries well enough to know that District Checks can . . . and will . . . inspire the makers of apparel of all types for men, for women and for children; as well as those whose products adorn the American home. Indeed, there is no end to the articles in which District Checks can be used in good taste and for good business.

But the manufacturing genius of this country must necessarily be buttressed with the dynamics of American retailing. For in the hands of the great sellers of the land lies the ultimate fate of what can be a fine and profitable idea. If they gain a true and clear understanding of the romantic background of District Checks, they will be quick to grasp the publicity value of fashions based on these Checks. If they find that the cream of the nation's manufacturers are seriously engaged in forming comprehensive lines built on the Checks, they will merchandise such goods in a major manner.

The Editors of American Fabrics can but present to you . . . the weavers of American textiles, the manufacturers of American fashions, the merchants and sellers of American goods . . . the essential soundness and validity of these Authentic District Checks. To you is given the opportunity to transform this idea into reality.

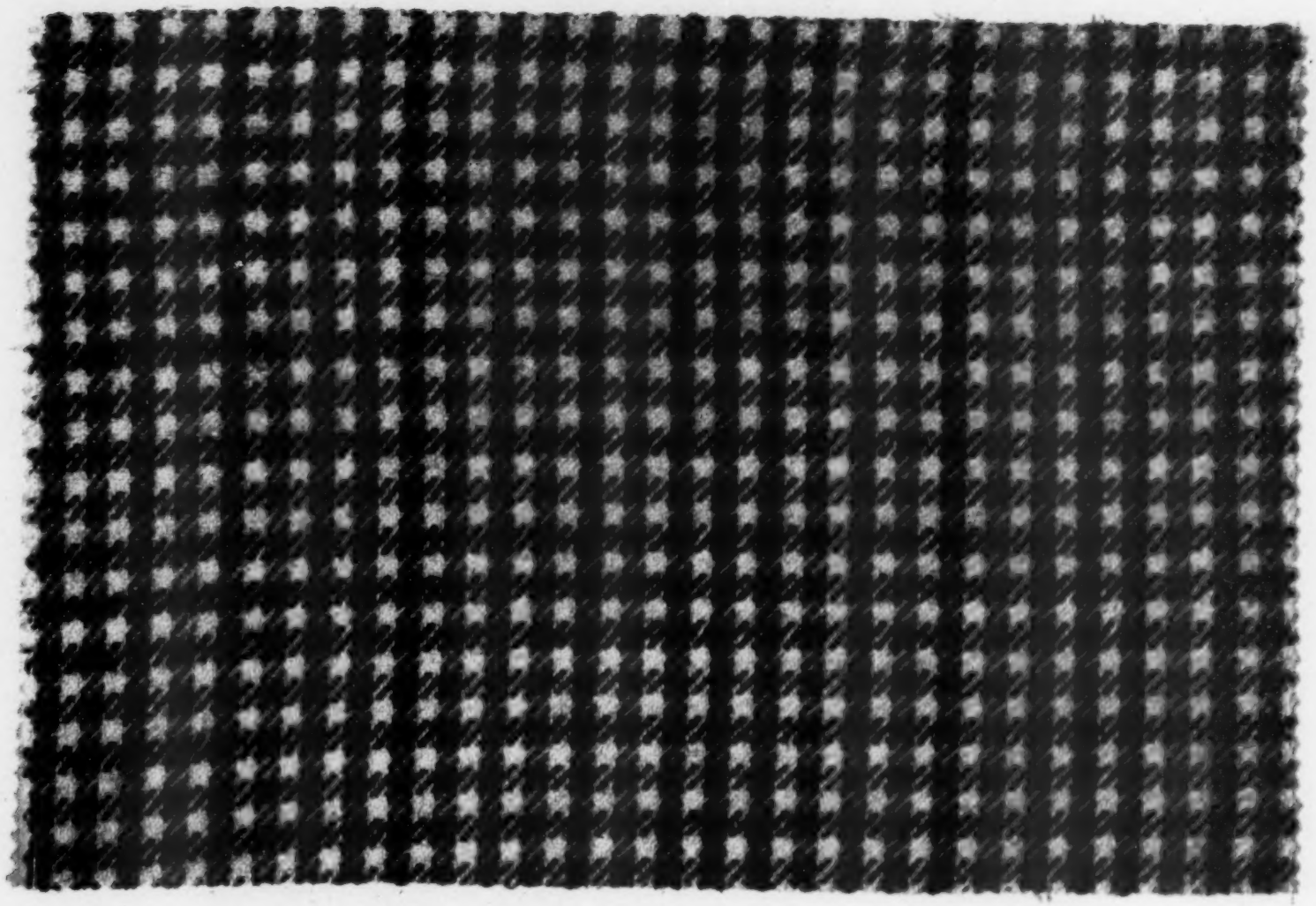
now please turn ☛

The Prince of Wales



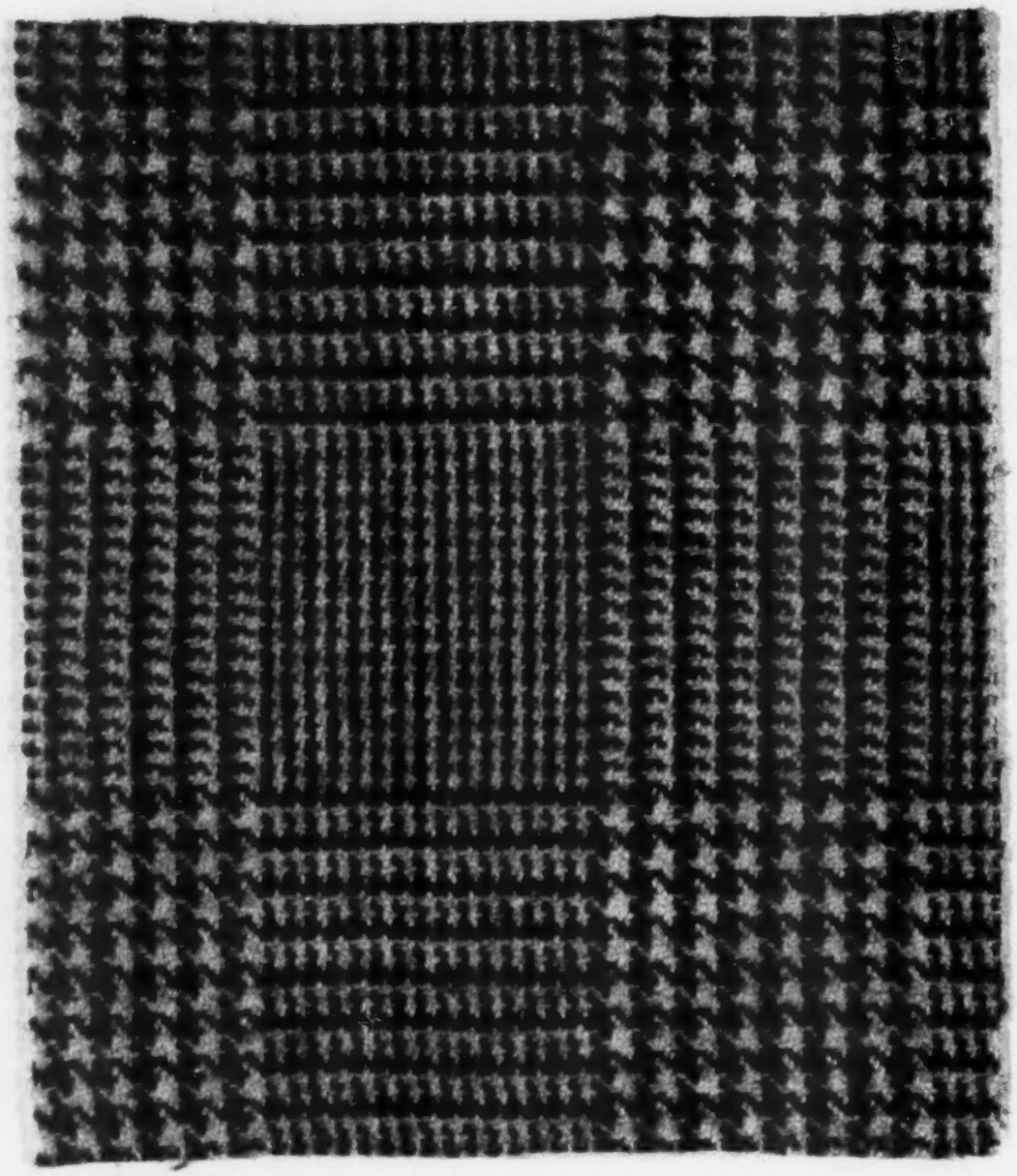
The Prince of Wales, one of the most handsome of the District Checks, owes its name to that of the heir to the British Crown. It follows the lines of the Small Glen Urquhart in that the two and two section is stripe down and stripe across on alternate blacks. Carried out on a red-brown and white ground the four and four section of the glen is boxed in with six ends on either side of navy blue. This pattern assumed fashion importance with the succession of Edward.

The Seaforth

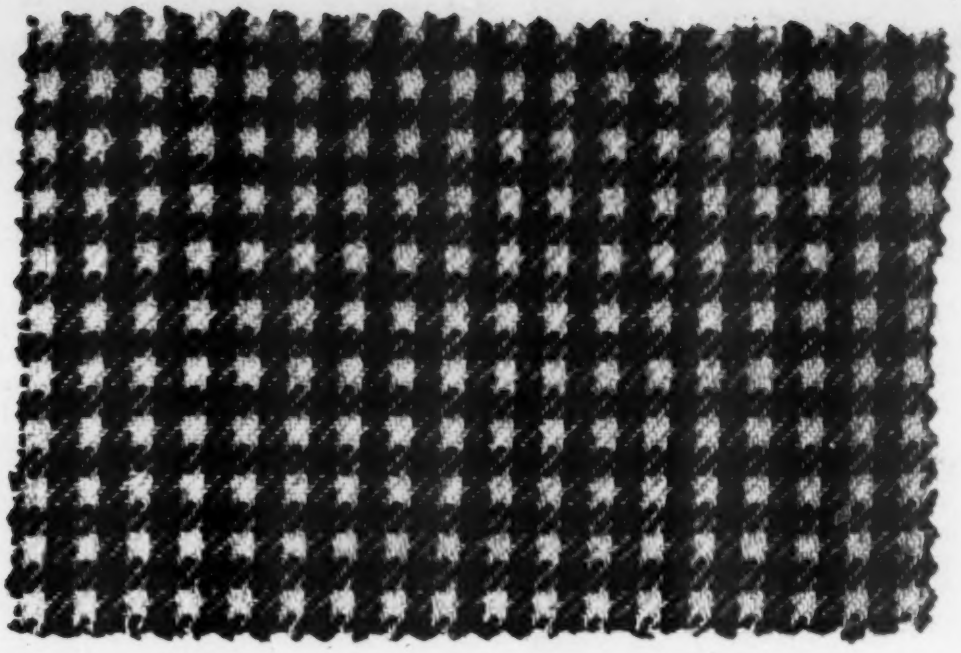


The Seaforth is the first of the regimental checks, and is used as a "mufti" tweed by the officers of the mess of the Seaforth Highlanders. Like the Coigach it is a white ground, with alternating checks of chocolate brown and tan, and a brighter russet overplaid displacing every fourth tan check. The all-over check measures a little over two and a half inches in the warp, and two and three quarter inches in the filling.

The Glen Urquhart Check

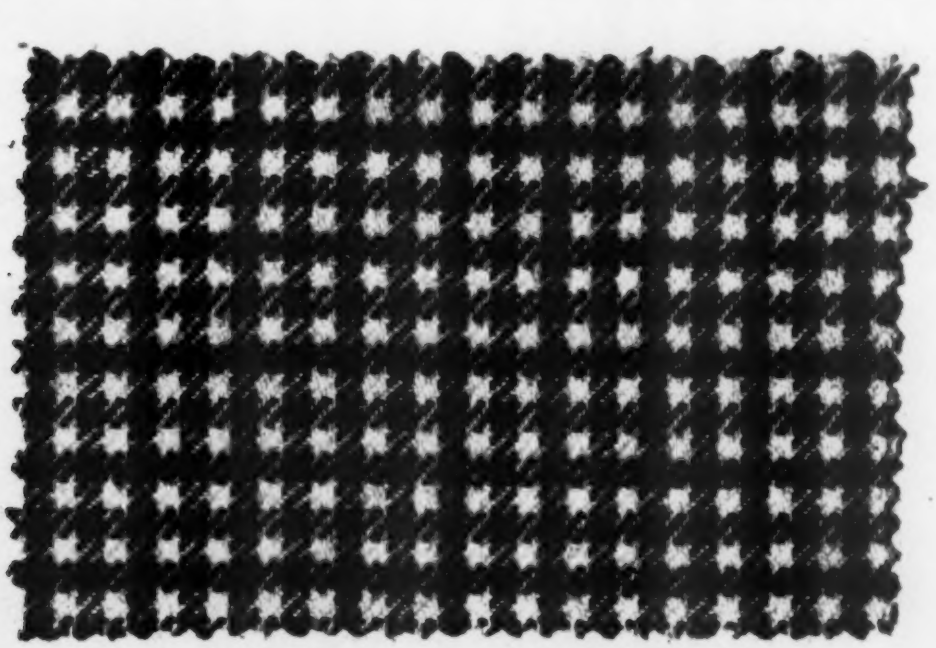


About half-way down Loch Ness, the stamping ground of that modern dragon known as the Loch Ness Monster, stands the battered old stronghold of Castle Urquhart, overlooking a wide and rugged glen from which is derived the name of the greatest single development in woolen designing — the Glen Urquhart Check — or as it is known in the vernacular of the American woolen trade, the Glen Urquhart Plaid. Originally when the design received the endorsement and approval of the Lady Caroline Countess of Seafield for use in her Glen Urquhart estates, it was known as the Glen Urquhart Tartan. The Countess herself was a famed handloom weaver, and for this reason it is possible that tradition has given her credit for creating the design. However there is evidence that the actual designer of the 1st Glen Urquhart Check was Lizzie Macdougall, who spun and dyed the blue and white yarn for the original web to be woven by William Fraser. Fraser had some difficulty in following Lizzie's instructions and she had to draw a diagram with a stick on the muddy front of his "but and ben." While this original plaid was navy blue and white, it was ultimately superseded by the black and white glen as we know it today. For the sake of the record the first Glen Urquhart check was designed in or around the year 1848.



The Ing

The Ing is also a derivative of the Shepherd, but a rich brick-red brown displaces the black of the Shepherd. The natives used a lichen, called Lecanora Tartarea, to obtain a red or crimson dye.

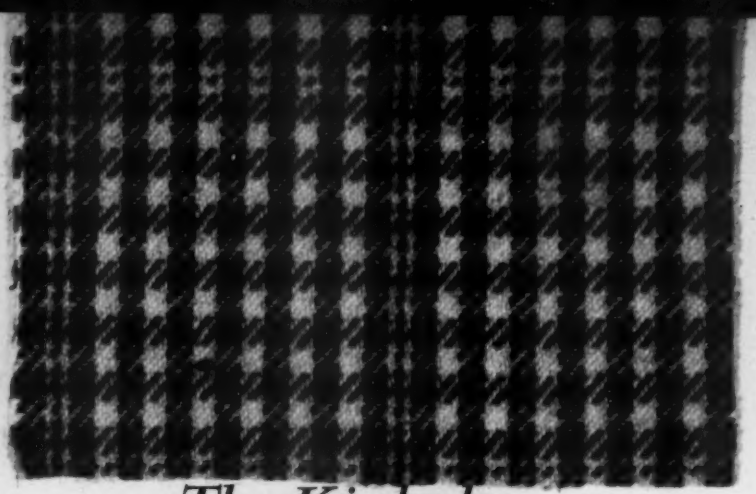


The Dupplin

The Dupplin District Check is on the same pattern as the Seaforth, with black and strong red brown displacing the chocolate and tan of the Seaforth. The overplaid in the Dupplin is a very bright scarlet, the boldness of which gives an entirely different effect to the style.

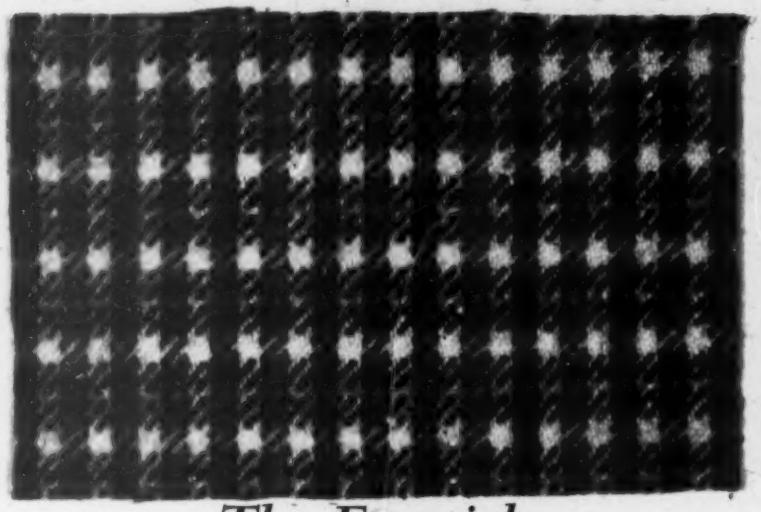
The Scots Guards

The Scots Guards Check is another regimental Check, in this case being used as a civilian tweed by the Officers of the Mess of the famous regiment of Scots Guards. The ground-work is a large basket effect produced by a two light and two dark warp and filling, but with four dark ends being brought together.



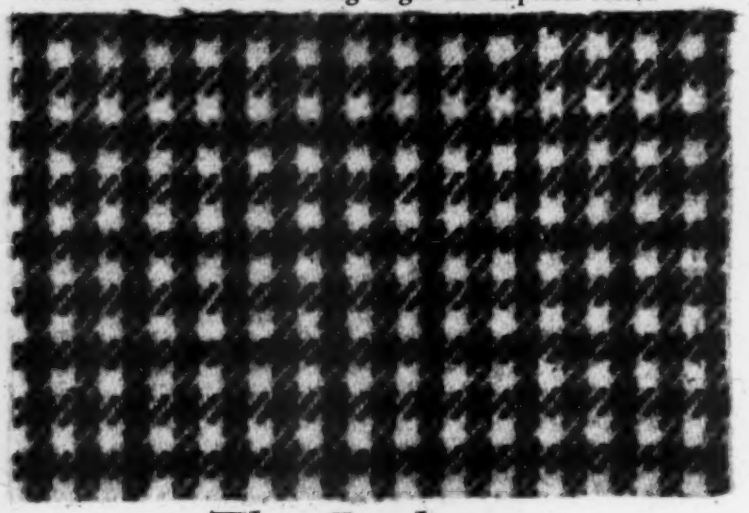
The Kinlochewe

This check from Kinlochewe at the head of Loch Maree, is another derivative of the Shepherd with a russet and white check in the warp . . . every seventh white check has one thread of black and one thread of scarlet displacing the two center threads in the check. In filling bright tan displaces russet.



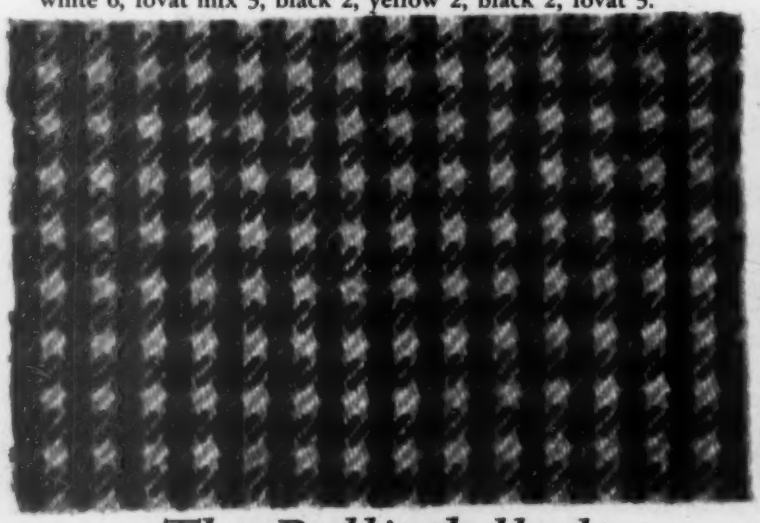
The Fannich

The Fannich is one of the few "Bastard" checks in that the filling pattern bears little resemblance to the warp. The filling is the same design as the Coigach with chocolate brown and lovat displacing the black and strong red brown. Warp pattern: white 6, lovat mix 3, black 2, yellow 2, black 2, lovat 3.



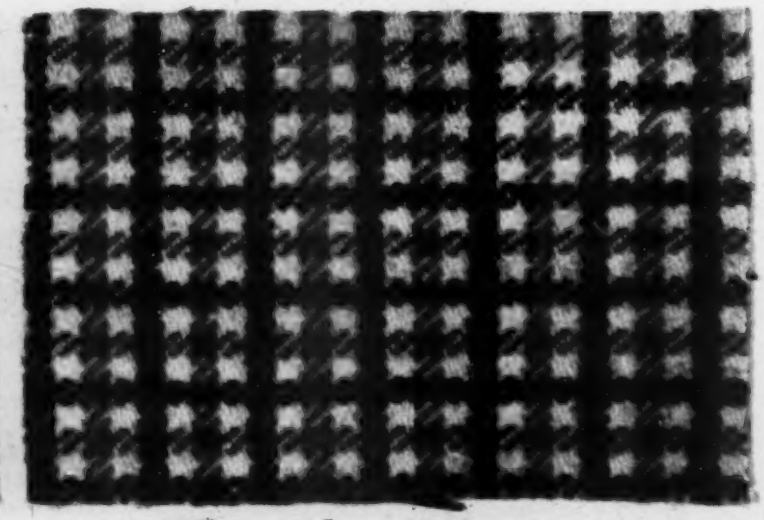
The Lochmore

The Lochmore is a gun-club like the Coigach, but a soft greenish lovat mixture displaces the black of the Coigach. The prefix "Loch" is the Gaelic name for lake.



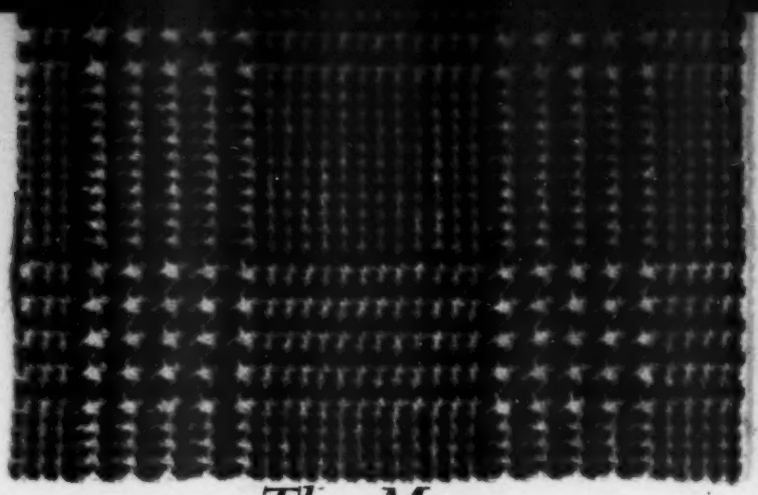
The Ballindalloch

Another Shepherd derivative, the Ballindalloch was first used on the Strathspey estates where Rudolph Hess descended when he landed in Scotland, and was met by a gillie brandishing a pitch-fork. No doubt the gillie was wearing his Ballindalloch District Check.



The Glen Moriston

The Glen Moriston belongs to the same era as the original Glen Urquhart Check. It is another gun-club like the Coigach on a white ground with alternating checks of dark Navy Blue and a light greenish lovat mixture similar to that used in the Lochmore but with a little more yellowish cast.

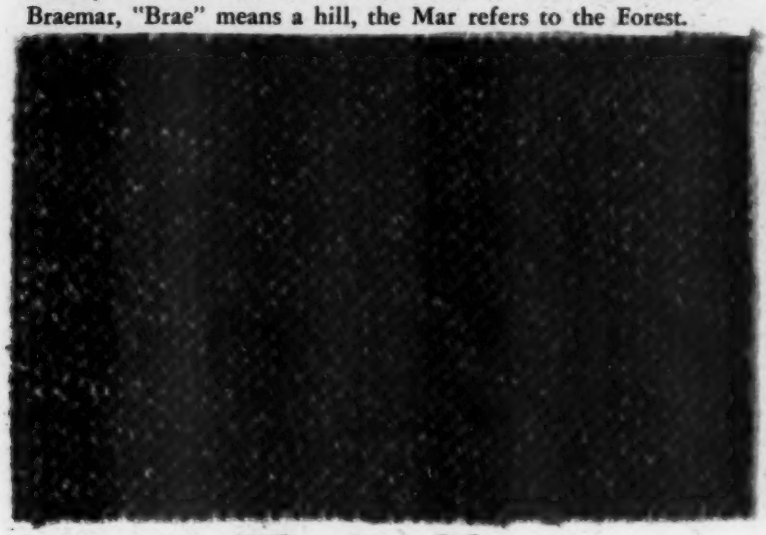


The Mar

The Mar is one of the few District Checks which can be called a derivative of the Glen Urquhart. Its development has been attributed to King Edward VII when, as Prince of Wales, he used to shoot on the Forest of Mar. In the word Braemar, "Brae" means a hill, the Mar refers to the Forest.

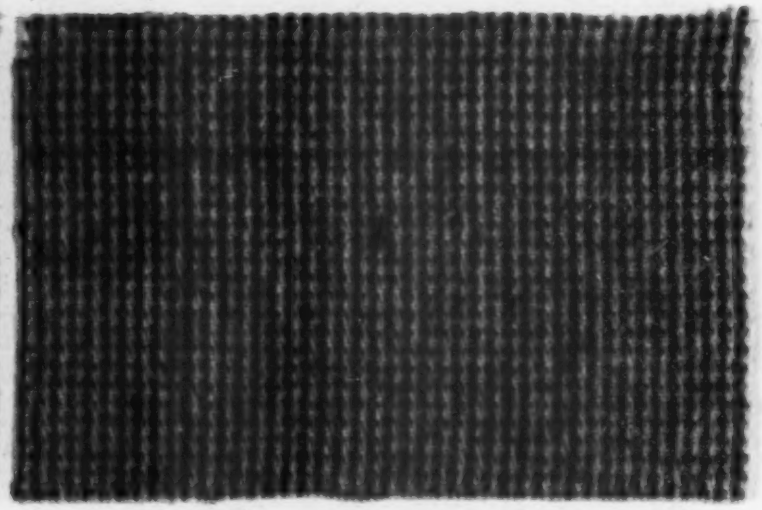
The Gairloch

The Gairloch is on the same warp as the Coigach, but with a biscuit mixture replacing the white in the filling.



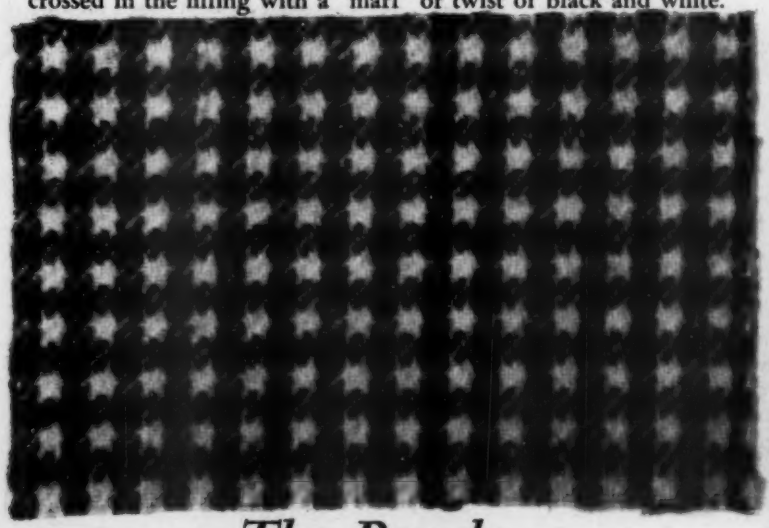
The Erchless

The Erchless takes its name from Castle Erchless, the home of the head of the Chisholms, and is on the Beauly River west of Inverness. The pattern itself is very unusual . . . in the warp three ends of white, pale stone drab and yellow, the whole crossed in the filling with a "marl" or twist of black and white.



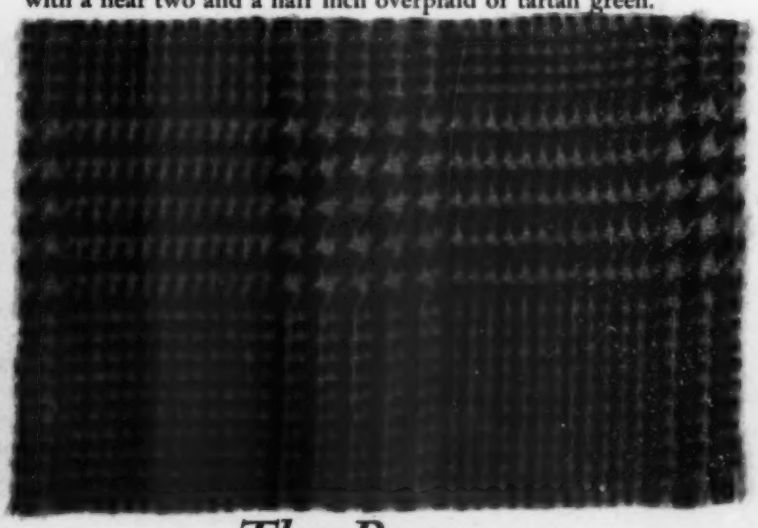
The Invercauld

The Invercauld is one of the most unobtrusive of all the District Checks. The Farquharsons of Invercauld, neighbors of their Majesties at Balmoral Castle, have adopted a two and two stripe down ground in white and brown and drab marl twist, with a near two and a half inch overplaid of tartan green.



The Brooke

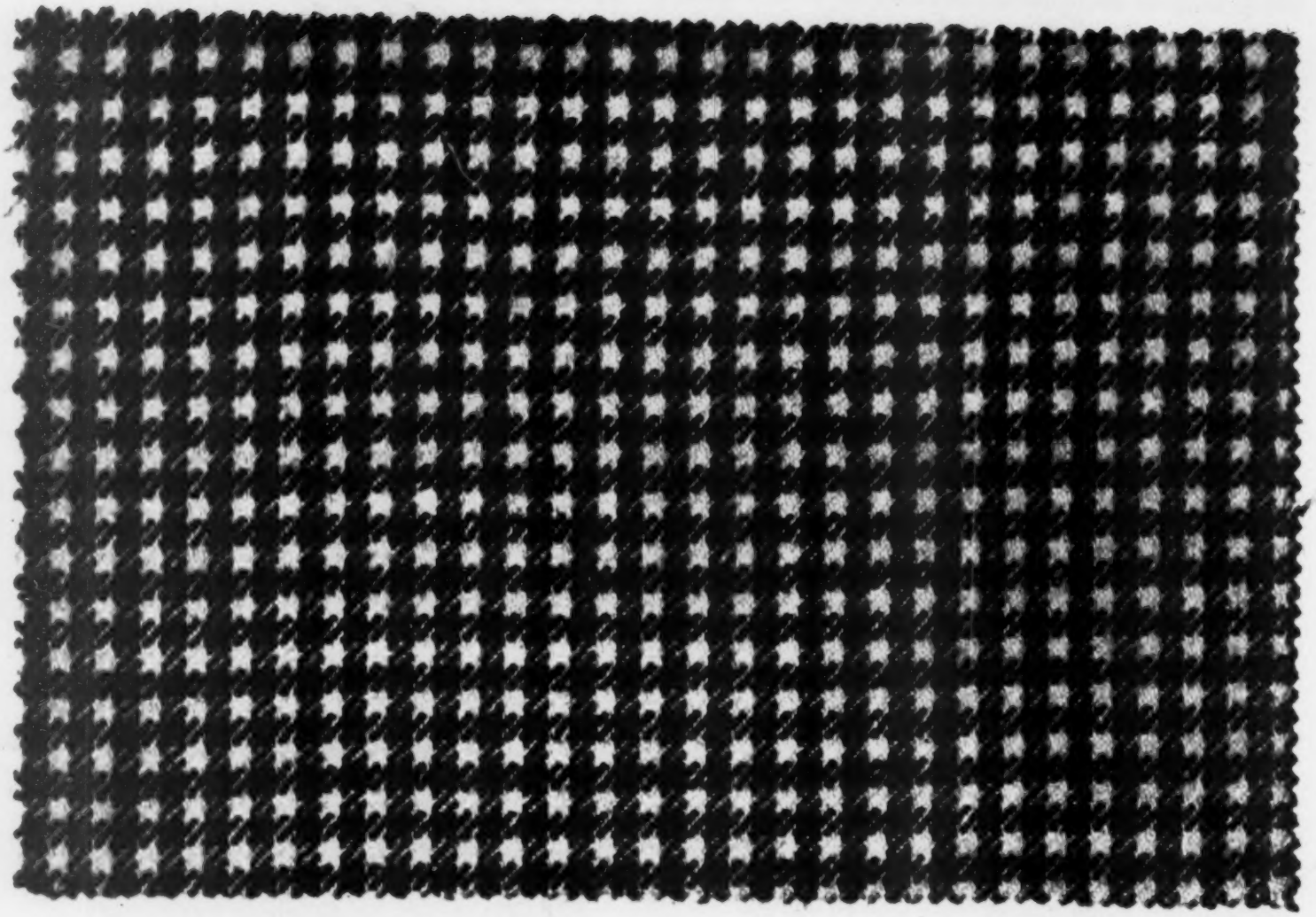
This check which is used on the estates of Lord Burton consists of black and white twist check alternating with an eight lovat mixture while every fourth lovat check is edged on either side with a single thread of scarlet. The sample illustrated can also be made with silver grey instead of white ground.



The Benmore

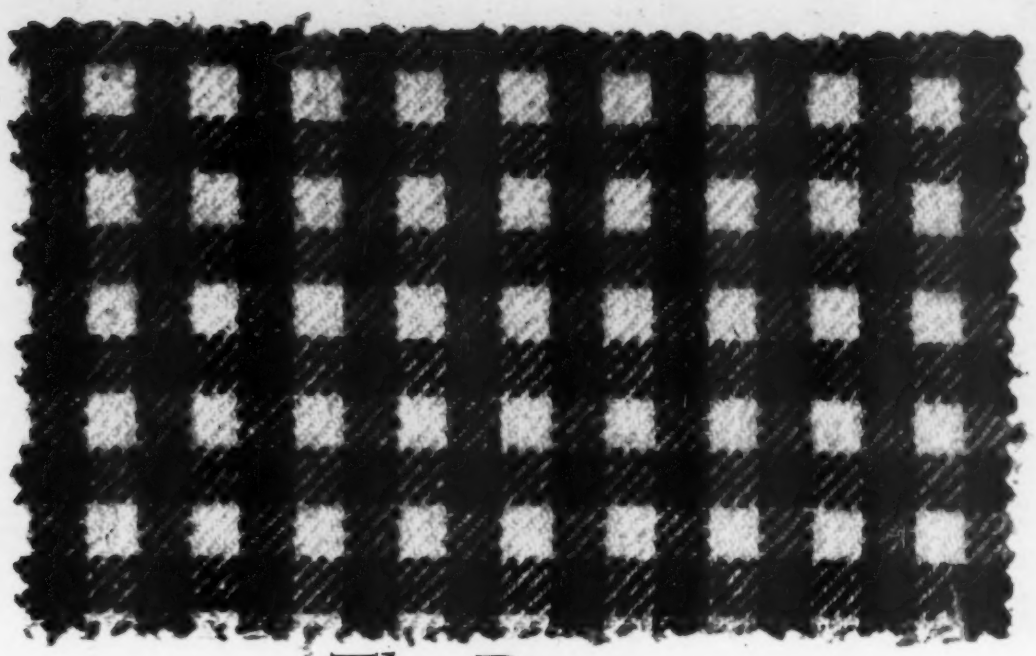
The Benmore District Check owes its name to the Benmore Forest, once the property of Mr. Harry George Younger, but now owned by the British Government, and used for forestry research. The Benmore check is more or less a diminutive Prince of Wales Check, but the overall design is much smaller.

The Coigach



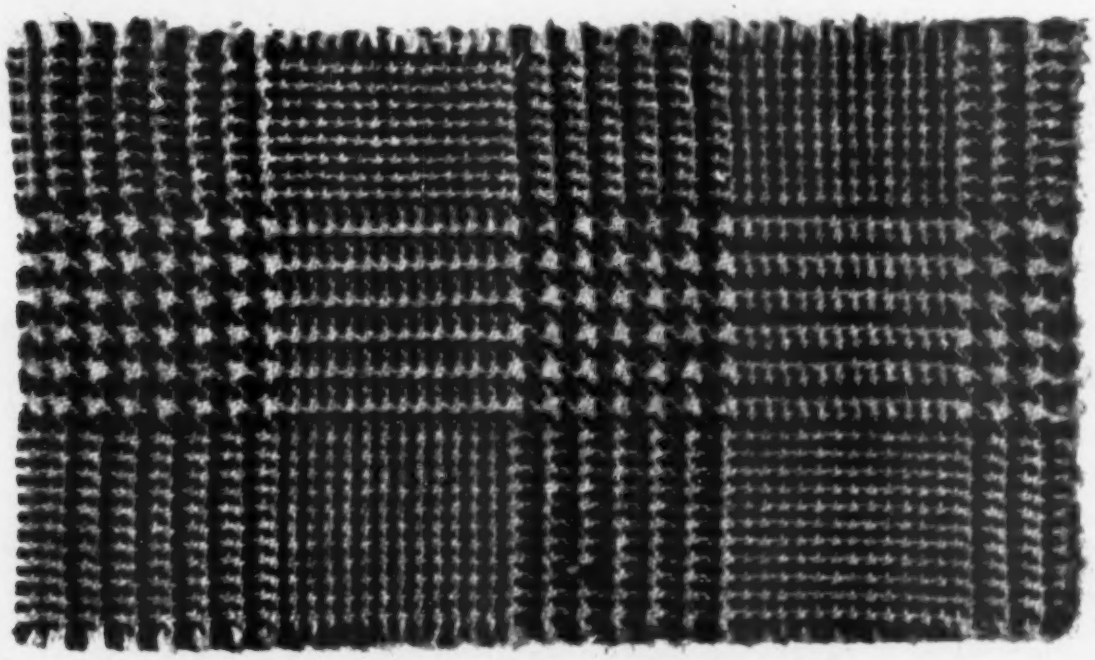
The first of the original Gun-clubs was adopted as the club check of one of the American Gun Clubs in the year 1874. It is like the Shepherd on a white ground, but with alternating checks of black and strong red-brown. The six-threads in the check are just a little less than a quarter of an inch in the fabric, and the all-over effect is both pleasing and distinctive. While the "gun-club" checks were adopted for use in American Gun Clubs, it should be remembered that the design was created by a Scotch woolen designer whose name has failed to survive that of his great creation.

Authentic District Checks — American Fabrics Magazine



The Dacre

The Dacre is a bold and distinctive check in exactly the same colors as the Coigach whose checks are twelve threads of white, twelve threads of black, twelve threads of white and twelve threads of rich red brown. The all-over check measures a little over an inch and a quarter.

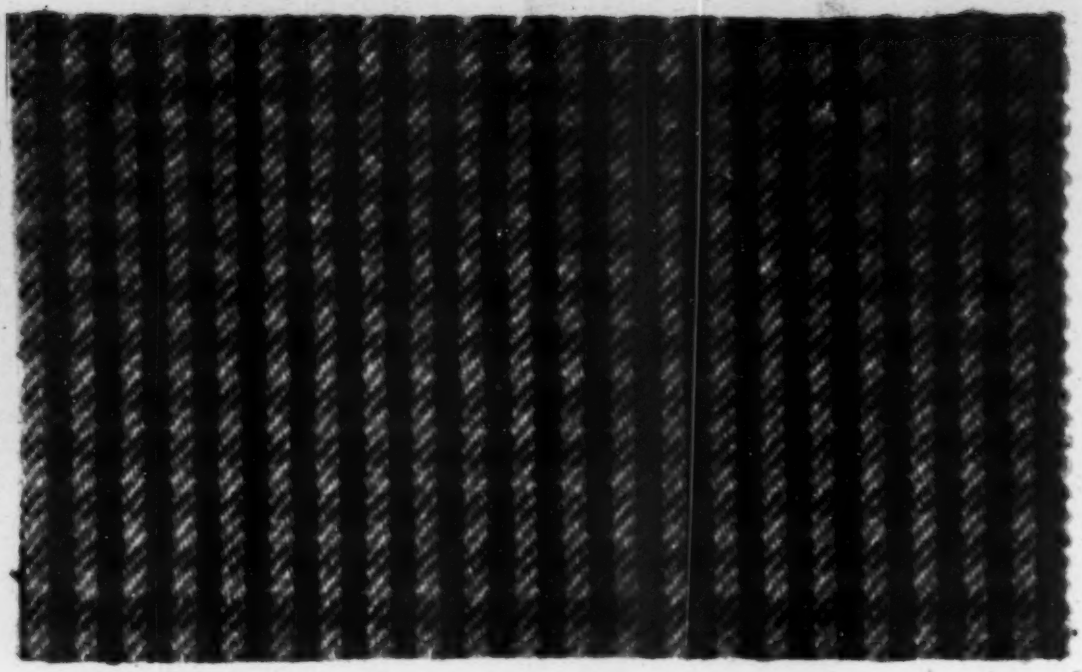


The Small Glen Urquhart

The Small Glen Urquhart Check is interesting for many different reasons. Sometimes incorrectly described as the "Small Glen" which is a valley in Perthshire far removed from the native Glen Urquhart, or the Small Glen Urquhart, the alternate two and two sections show stripe down and stripe across. This is caused by the fact that the four and four section in both warp and filling starts and ends with the same colour, light in the warp, dark in the filling. The fact that the four and four section has the same colour on both sides, disposes of the objection sometimes raised to the standard Check which starts with four ends of black and finishes with four ends of white.

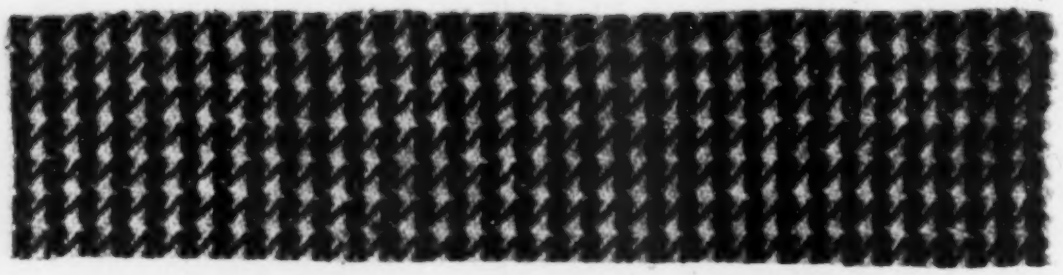
The Russell

This check follows the pattern of the Ballindalloch with a ground of six black and six white in the warp with a russet overplaid displacing every eighth black check. The filling consists of tan and tan and white twist displacing the black and white of the warp, while the russet in the warp overplaid is also used in the filling. Due to the contrast in ground lines, however, the overplaid appears wine colored in the filling and russet in the warp.



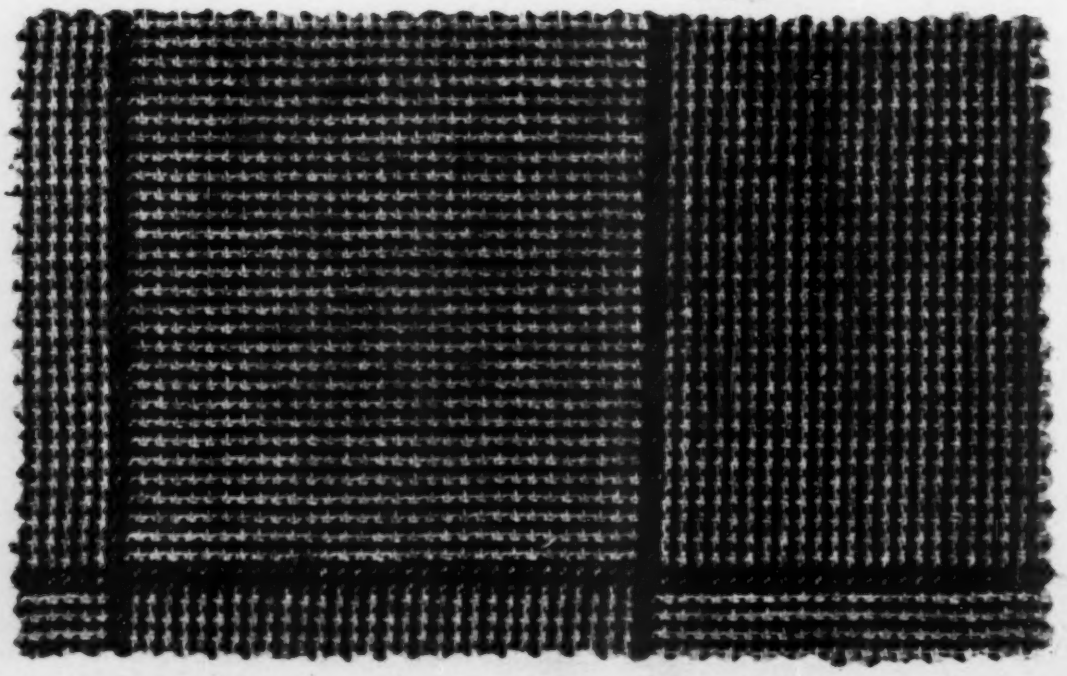
The Guisachan

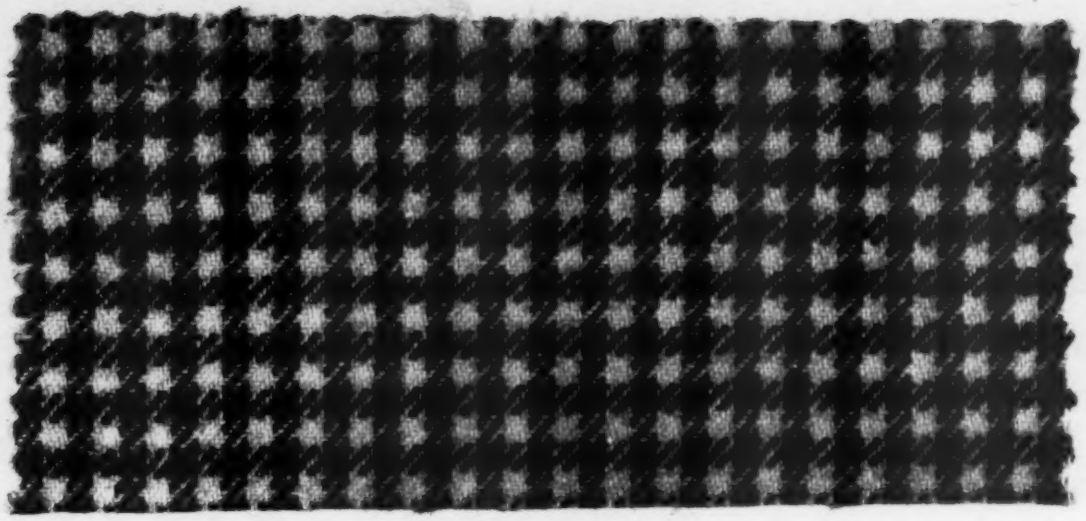
This check uses the four pointed hound's-tooth star, for ground effect. The four black and four white of the warp is crossed with four tan and four white in the filling. The weave is the four harness-twill 4 and 4 Herring-bone.



The Horse Guards

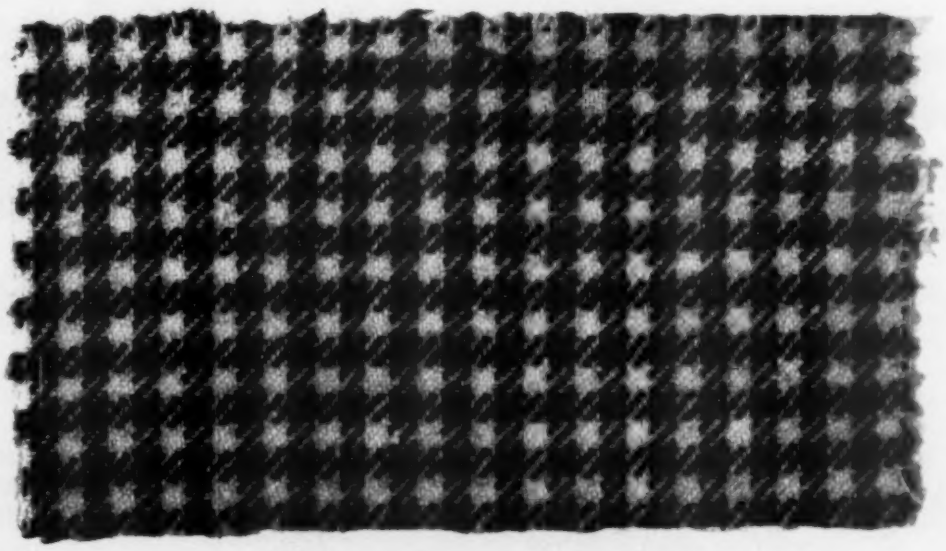
The Horse Guards Check is another Regimental Check used as civilian attire by the officers of the mess of the Horse Guard. It is also another derivation of the two and two stripe down and stripe across basket, in this case having a rich red brown and white ground, with four ends and picks of navy coming together at one point to throw the brown and white two and two pattern off balance. When this fabric is weaving in the loom the dark ends on one section are raised and the light ends on the other, and vice versa. In this case the complete design measures almost seven inches.





The Shepherd Check

The Shepherd Check of the Scottish Borders is the foundation on which the entire series of District Checks rests. It had been the custom among the shepherds on the Cheviot Hills to wear a "plaidie" or shawl made of what became known as the Shepherd Check.There has been many a hot debate on whether a Shepherd Check was the four white four black or the six white six black pattern. Actually either could be right or wrong because the Shepherds' Check consisted of about a quarter inch of white and a quarter inch of black, so that the number of threads in the pattern was controlled by the size of yarn used in the fabric. This "plaidie" or shawl measured around four yards long and about a yard and a half wide and from this fact arises the trade expression "six quarter wide." Ultimately the pattern traveled northward with the shepherds, until it became as well known in the Highlands of Scotland as it had been in the Lowlands.

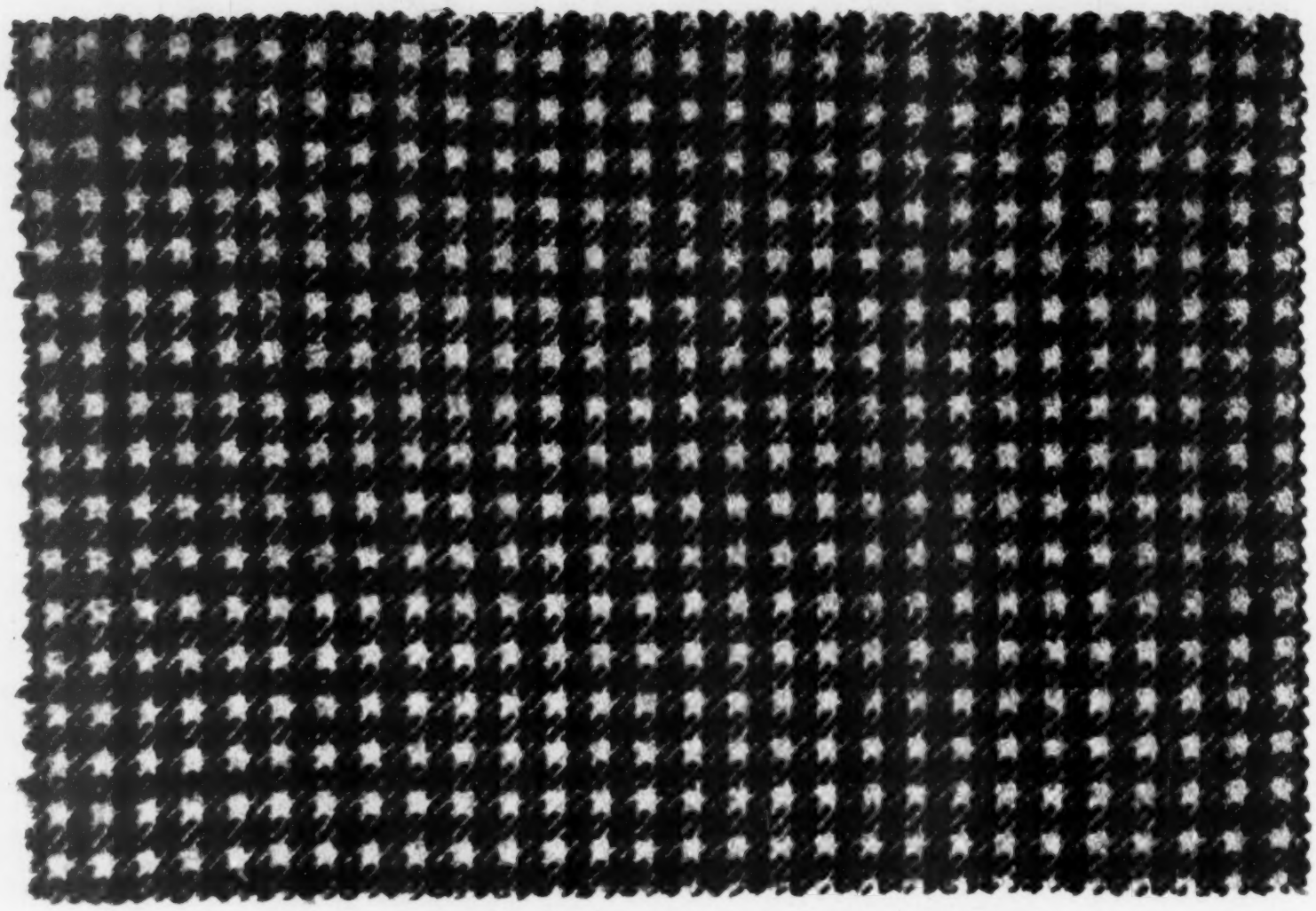


The Glenfeshie

The Glenfeshie is a derivative of the Shepherd. On the same black and white ground as the Shepherd a bold scarlet overplaid displaces every tenth black check. It is at once the boldest and yet the most invisible when seen in its natural surroundings, among the red and grey granite rocks over which the river Feshie tumbles on its way to join its parent the Spey. The check was said to be designed by the daughter-in-law of the Right Honourable Edward Ellice M.P. who tenanted Glenfeshie from 1834 to 1841. The check was worn by Mr. Ellice and all the gillies and gamekeepers on the Glenfeshie Estate. Local tradition, however, avers that the scarlet overplaid was introduced to distinguish the gillies and gamekeepers who worked in the forest, from the shepherds.

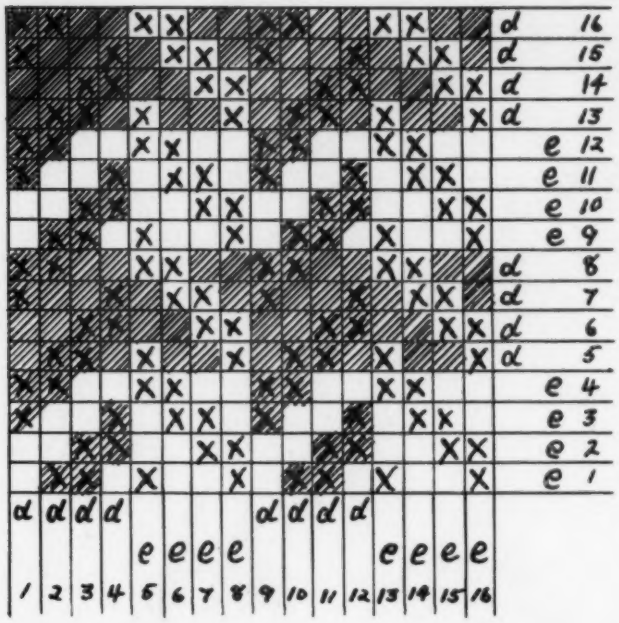
Authentic District Checks — American Fabrics Magazine

The Strathspey



The Strathspey is on the same gun-club ground as the Dupplin, but with a very dark over-check displacing the bright scarlet of the Dupplin. The Strathspey owes its name to the Strathspey Reel and Highland Dancing. Natives found in past centuries that Winter is the best time for gathering the lichen from which is derived the dyes used in these checks.

Authentic District Checks — American Fabrics Magazine

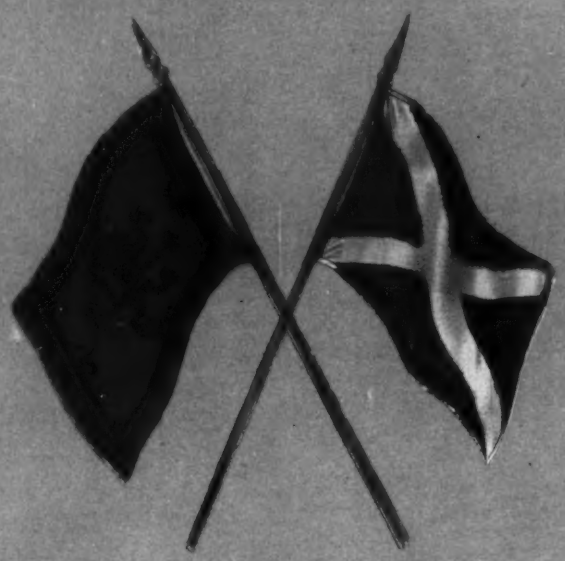


Construction layout for weaving the GUISACHAN DISTRICT CHECK — a four-end twill with 4 colored ends and 4 white ends; 4 colored picks and 4 white picks.

The Authentic District Checks

1. The Prince of Wales
2. The Seaforth
3. The Glen Urquhart
4. The Ing
5. The Dupplin
6. The Scots Guards
7. The Kinlochewe
8. The Mar
9. The Gairloch
10. The Fannich
11. The Lochmore
12. The Erchless
13. The Invercauld
14. The Ballindalloch
15. The Glen Moriston
16. The Brooke
17. The Benmore
18. The Coigach
19. The Dacre
20. The Small Glen Urquhart
21. The Russell
22. The Guisachan
23. The Horse Guards
24. The Glenfeshie

25. The Shepherd Check
26. The Strathspey



For a complete manufacturer-to-store-to-consumer merchandising program on District Checks, we respectfully call your attention to the forthcoming Number Ten issue of American Fabrics. Inquiries are invited from manufacturing and retailing executives as to how they can actively participate in this all-inclusive merchandising program. -- The Editors

ADVANCE INTEREST IN DISTRICT CHECKS IS ALREADY KEEN

In the foregoing sixteen pages you have seen reproductions of true fidelity, of the most important Authentic District Checks. The interpretation we place on the word *important,* not only editorially but from the viewpoint of all those who will engage in the nation-wide promotion for Spring, 1950, is this: *important as a major fashion pattern.*

As a corollary, the patterns are important in the sense that they can be reproduced under American mass production methods without sacrifice of either efficiency or profit potential.

It was only natural, upon the first presentation of the basic idea of a District Checks promotion, that mill men should bring up the question of whether the retailer . . . the final link and truly the determining factor in the successful selling of the goods . . . would be receptive to the program; whether the retailer could see the selling potential; whether the retailer, representing the consumer, felt that the American public would be prone to buy substantial quantities of merchandise styled under the broad banner of Authentic District Checks.

The answer obviously had to come from the retailer himself; and so the editors of AMERICAN FABRICS wrote to a number of the nation's leading retail merchants, explaining the District Checks promotional and merchandising plan, and asking them for a frank expression of opinion. As we go to press, with replies still coming through the mails, we are gratified to report that among those fine stores which are awaiting the preparation of actual merchandise in District Checks are:

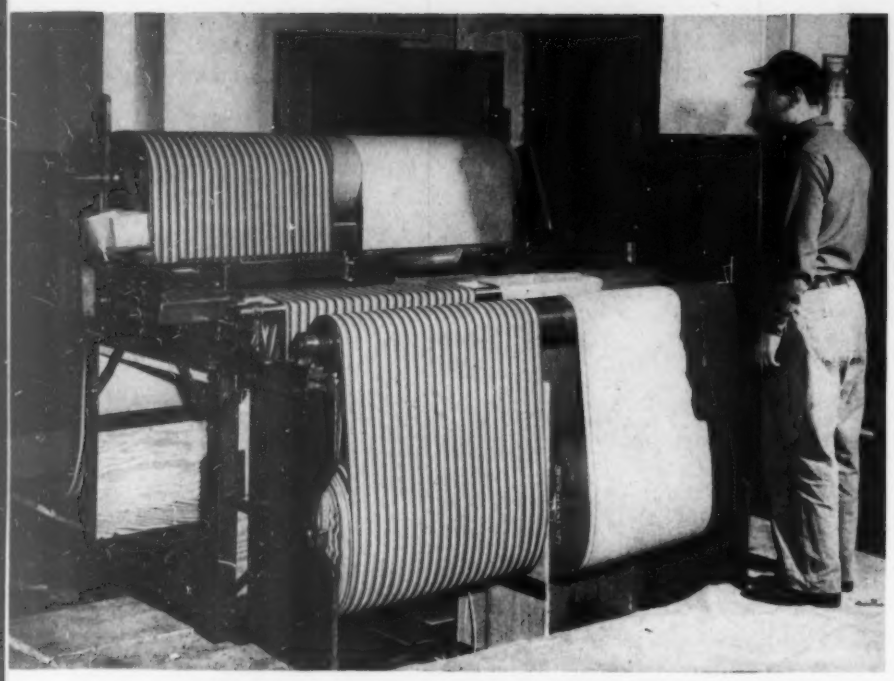
Lord & Taylor in New York
Stix, Baer-Fuller in St. Louis
Bullock's in Los Angeles
Wm. H. Bolck Co. in Indianapolis
Kennedy's in Boston
Snellenburg's in Philadelphia
Famous-Barr Co. in St. Louis
Butler Bros. in New York
Jacob Reed's Sons in Philadelphia
Berry-Burk & Co. in Richmond
Clark's in Tulsa
Brill's in Milwaukee
Blach's in Birmingham
Flint & Kent in Buffalo
E. M. Kahn & Co. in Dallas
Boyd's in St. Louis

George Muse Clo. Co. in Atlanta
Filene's in Boston
Greenfield's in St. Louis
Richman Bros. in Cleveland
Abraham & Straus in Brooklyn
Capper & Capper in Detroit
Weber & Heilbroner in New York
Gimbel Bros. in Philadelphia
Brooks Brothers in New York
Wolff's Clothiers in St. Louis
E. W. Edwards & Son in Syracuse
Browning King & Co. in New York
Stackpole-Moore-Tryon in Hartford
Kresge Dept. Store in Newark
Thalhimer's in Richmond
Samter Brothers in Scranton

District Checks has been suggested to these retailers, and to their confreres, as a Spring-1950 merchandising event, to allow the mills and the manufacturers adequate time to prepare their lines. We visualize the array of merchandise as covering a large number of fields: apparel for men, women and children, home furnishings, and accessories. Certain manufacturers with whom we work closely are already working on their lines, in conjunction with mill people who got off to a quick start on District Checks.

AMERICAN FABRICS has taken the first two steps . . . the assembling of the District Checks and the alerting of the retailer. In the next coming issue we plan to carry the program a step further, by tying the idea into finished consumer goods. However, at this point the plan must be put into effective operation by more American mills. District Checks can, and should be, reproduced in all fibers: wool, rayon, cotton, silk and synthetics. The greater the diversity of available fabrics, the greater the magnitude of the District Checks success.

From fiber to ultimate consumer, the nation needs the stimulus of workable new ideas to speed the distribution of goods. A strongly coordinated District Checks promotion can be that stimulus.



Measuring cloth as it comes from mill with automatic printing of yardage on ticket.

Inspection of cloth for defects prior to processing (from mill).

THE IMPORTANCE OF PROPER SHRINKAGE

"For want of proper shrinkage the finish was lost . . . for want of finish, the appeal was lost . . . for want of appeal the sale was lost."

There was a time when the science of shrinking and conditioning fabrics was not a science and merchandise was subjected to a haphazard slapstick treatment that bears as little resemblance to modern methods as the first silent films to modern day award winners.

Today American-London Shrinkers, leader in this field, is represented by three generations: Bni. J. S. Moss, one of the original founders Ted Trilling, a nephew, whose sincerity and deep interest well equips him for the most active post in the corporation; and Ted Trilling, Jr., Mr. Trilling's son, now attending Lowell Textile College in preparation for his future service to the corporation.

These three generations symbolize American-London's wholehearted devotion to the scientific development of this industry and consistent contributions to it.

It all began 50 years ago when the Moss brothers, led by Mr. B. S. Moss, pioneered the field and began to supplant the unreliable approach with precision, practical application of processes, and an all-out honest attempt to do well by the fabric.

In 1898, Benjamin S. Moss and Company began business at 564 West Broadway. Initially a small firm engaged in shrinking and conditioning woolens, the firm catered exclusively to the garment trades. The equipment available at that time was of a relatively limited variety and was operated by hand for the most part. Horse-drawn vehicles provided the primary means of transportation and the entire business was geared to the slower tempo and production methods of the period.

The subsequent moves of the firm to 56 Prince Street, 137 Wooster Street, and 12 East 12th Street, marked gradual developments of greater efficiencies as a result of inventions and new equipment for the improvement of its service and product. Upon moving to the present address in 1926 the name was changed to the American Shrinkers Corporation, and in 1932 to the American-London Shrinkers Corporation.

This business that grew up with a great city and a great industry began to prove conclusively that there was more to a good wool or worsted fabric than meets the average eye. As the years went by, the American-London Shrinkers further proved that the plus that separates the good woolen from the poor or mediocre one is provided by expert shrinking and conditioning — based on standardization and the development of predetermined processes capable of opening new merchandise vistas for the trade and mills in particular.

The most recent development in this business that began so modestly is a complete division whereby one plant serves the garment trades and the other serves the mills. In the latter case, the fabrics are delivered to the garment manufacturer ready for the cutting table without any further inspection or treatment. This has unquestionably created a trend as a result of the uniformity of the finished product made available by the mill. It has been the best

Testing for tensile strength in warp and filling prior to processing (from mill).

Semi-decating steaming and cooling for finishing after water shrinking to maintain absolute accuracy of pattern.

and only method thus far of complete satisfaction for the mill, the retailer and the consumer.

Since there exist three definite groups to satisfy, only hard work plus a never ending scientific approach can provide the necessary satisfaction. So although a long distance seems to exist between the mill and consumer, ultimate consumer satisfaction depends largely on how well the woolen fabric is handled from beginning to finish. The expert in this field, as in any other, must have a thorough familiarity with his medium and a clear conception of the goals involved. This is the answer to the importance of expert shrinking and conditioning and the sales-important reason why every user and buyer of woolens must understand these processes and insist upon this protection.

The American Way is the exclusive system of shrinking and conditioning wool and worsted fabrics that allows for no by-passing of any key steps and ultimately provides better fabrics, better fashions, better buys.

How It Begins

The first service requires the shrinker to qualify each cloth submitted in order to produce as perfect a final product as possible. This cloth is tested as to strength, and inspected for defects such as irregularity in weave and shade. After the tests and inspection, it must be classified as to what shrinking-conditioning treatments will assure the greatest serviceability and most enhance the appearance.

What Is Shrinking?

We all know generally what shrinking is — and we all know more specifically the disastrous results that occur when shrink-conditioning is not applied properly. If fabrics fail to stand up to initial and subsequent pressings, climatic conditions, and later to cleaning and long-term wear — customer confidence all along the line is lost. Therefore, the shrinking process must not only protect the cloth but retain or improve if possible the original creation of the mill.

Shrinking is a process by which cloth is made immune to any further shrinkage that might manifest itself in the finished garment and thereby alter the size or shape of the garment. Shrinkage is accomplished by various processes, the choice of which depends on the type of fabric involved. One process involves immersion in water and drying; the other is treatment with steam so that the yarn is contracted and as a result will resist further shrinkage.

What Is Conditioning?

Conditioning is that treatment which makes the most of the original wool. This process is based on the specific characteristics of the fabric as to weight, weave and finish and therefore the process must be determined by laboratory experts. With each fabric the tailoring qualities and control of weight must act as guides.

Conditioning is accomplished through the use of decating machines and a series of various types and weights of aprons. Decating involves the rolling of fabric inside a heated blanket or apron — both of which are wrapped around a perforated steaming cylinder at varying tensions. High pressure steam is then injected through the cylinder and penetrates both the fabric and the apron. After full penetration is accomplished, the steam heat and moisture are extracted through a vacuum pump — the extent of which is applied also in relation to the type of fabric being treated and the degree of lustre and finish desirable.

Light dress weights receive minimum shrinkage so that the original weight can be most effectively maintained. But made shrinkage resistant in the garment heavier fabrics that demand tailoring "get the works" because they do not respond unfavorably to weight change. The conditioning process described above has a tendency to set the yarn and thereby provide resistance to further shrinkage.

Conditioning of Soft Finish Fabrics

In the handling of soft finish fabrics the necessary shrinkage is obtained by steaming, drying and cooling the fabric prior to rolling so as to retain the napped condition so essential to the appearance of the finished piece of goods. The drying takes place by means of passing fabric over a heated plate and then over an extractor which removes all of the heat and moisture.

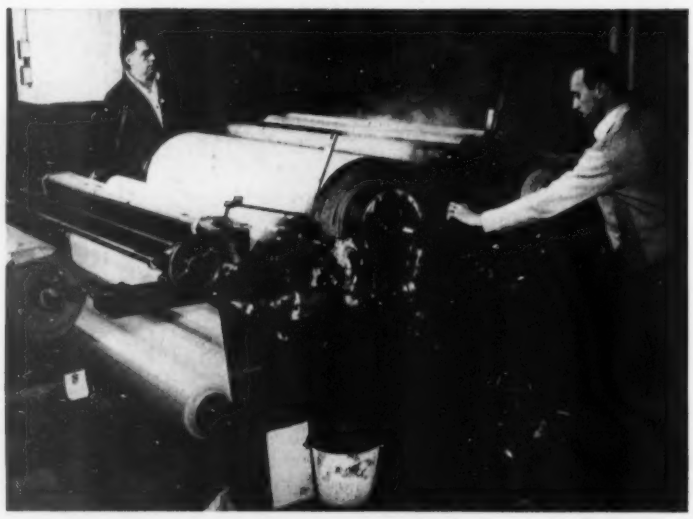
To Sum Up

Thus, when the proper shrinkage-resistance is accomplished and a desirable finish is developed, a maximum satisfaction is guaranteed to every mill, manufacturer, retailer and consumer. For in arriving at a finish that lives up to the original creation of the mill as well as the design needs of the manufacturer, the final

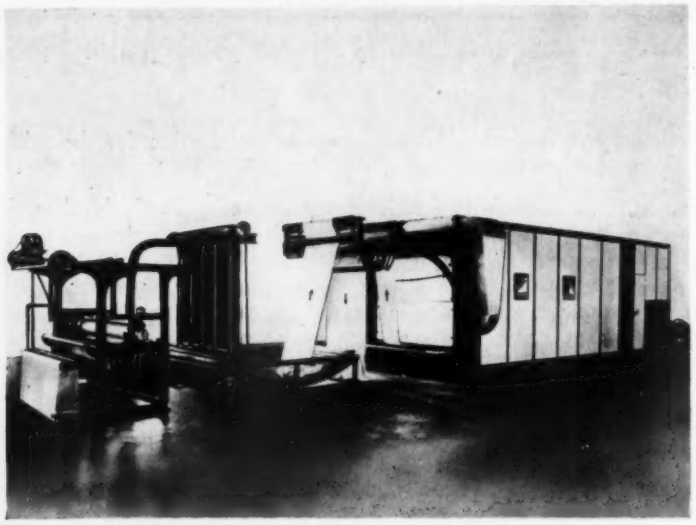
(*continued on next page*)

Steaming double cylinder shrinking broadcloths . . . modified for dress goods.

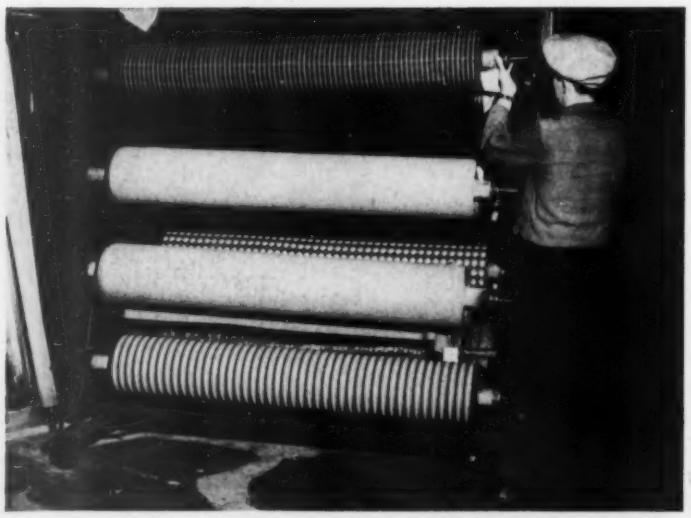
Steaming . . . drying . . . cooling used for shrinking soft finished and pile fabrics to retain character.



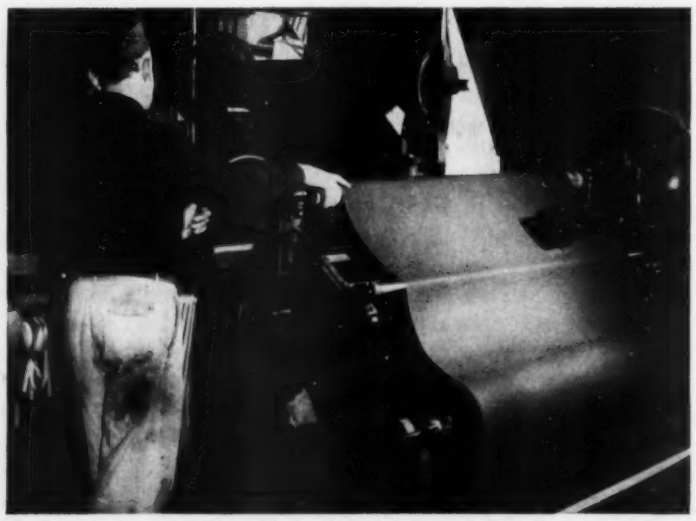
Steaming plus cylinder sponging and semi-decating . . . cooling combination machine for Venetians, coverts, etc., (pat. pending).



Water shrinking and drying prior to semi-decating (new machine).



Natural cooling after steaming process to restore original finish (time element). All other cooling is artificial by extraction (after process).



Doubling and rolling of wide fabrics by machine on boards, automatically measured and yardage imprinted on ticket.

garment can only be a more attractive, serviceable and salable one. What looks good in the finished woolen will most assuredly sell in the finished product.

The Winners

The Textile Mill: As a result of carefully standardized shrinking and conditioning processes, the mill stands to gain in reputation. For a properly finished fabric that has received specific and consistent treatment can continually qualify as a top entry in the competitive fabric-fashion field. Therefore, the mill that is primarily interested in looking ahead to the reception of its fabric all the way along the line — the mill that is interested in maintaining a hold on the fabric affection of countless consumers — can best profit from investment in this expert and technical service.

The Garment Manufacturer: With the (research) behind him, the manufacturer can expect uniform weight, finish and shrinkage from his fabric. Guesswork is eliminated — and constant sales appeal can carry through from sample to last delivery. In an industry famous for its many unpredictable features, here is something that can be standardized, depended on, and can be used with confidence as a buying and selling guide.

The Retailer: Here, at the last stop before the consumer, top quality merchandise can lend new prestige and greater sales potential. Customer complaints and returns can be minimized — and customer confidence in tested textile products and the stores that sell them can be increased.

In a consumer world that is growing more quality conscious, more tested-fabric conscious, every day — a retailer who is sufficiently alert to anticipate the needs of these consumers can benefit to the extent of being that many steps ahead of his competitor.

The Consumer: Every final purchaser of woolen fashions has two yardsticks: How does it look? How will it wear? The product that can most completely measure up to these specifications will sell. The satisfied customer will return to the store that consistently stands behind its merchandise.

To Sum Up

The proper shrinking and conditioning processes demand an assumption of responsibility from the beginning: the mill must assume the responsibility for selling the best possible kind of fabric that can be arrived at. The shrinker must assume the responsibility for using his skills in the best way possible so that the fabric product will benefit to the highest degree. The manufacturer must in turn create a product with a background of quality because he is responsible to the retailer, who must in turn sell those woolen products that are most representative of the skillful attention and care that are satisfying. The consumer is responsible without repercusion to her pocketbook — and since she is prone to settle for nothing less than the best, shrinking and conditioning become a very tangible part of the fashion story.

At American-London the future is regarded as an extension of present policies that continue to stem from experience past and present plus potential developments in the fabric and textile machinery field that might improve its service both in quality and speed. An integral part of the present and future is key personnel, represented by head men and their assistants in all departments. In this way the men who create the policy, the men who carry out the policy, and the many men within the industry who are affected by the policy, can work cooperatively and gain cooperatively.

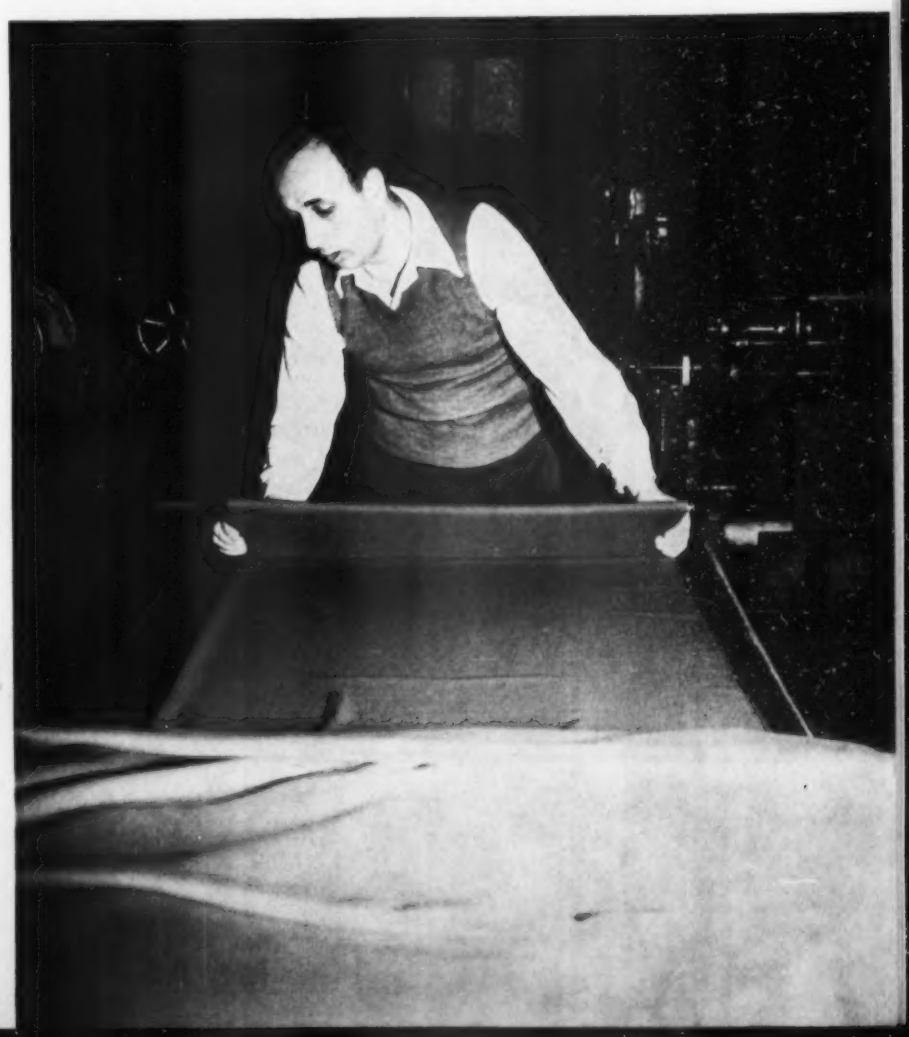
For where reputations are involved, responsibility must be assumed. This is a trend that is growing in our industry and should become the goal of every individual and organization that must ultimately service and answer to the consumer.

The American Way provides a significant signpost as to where the industry is — and where the industry is going.

Hand operated steam machines, vintage 1905.

Patented Moss textile measuring machine. First mechanical means of measuring replacing the yardstick and table.

Hand rolling after processing on lightweight fabrics to avoid distortion.



Above is Mrs. Ghodsee Kia wearing two versions of the sari. At left, she drapes it Hindu fashion, bareheaded; at right, Mrs. Kia wears her sari Parsi style.

Opposite page is a reproduction of an early XVII Century Muzhal painting depicting ladies of an Indian court amusing themselves on a garden terrace.

INDIAN SARIS

INSPIRE AMERICAN DESIGNER

Rare and beautiful Indian saris . . . with designs worked in delicate patterns . . . in threads of pure silver and gold and colorfast pastel silk . . . on hand-loomed silk . . . are the inspiration for Jacquelyn Ross's sensational one-of-a-kind sari evening gowns. Using authentic, imported Indian saris in combination with other delicate fabrics Mrs. Ross glorifies and enhances their beauty with her own concept of draping and styling which is in marked contrast to the Hindu and Parsi styles as worn by native Indian women.

The Hindu drape is distinguished from the Parsi mainly by the fact that it is not worn over the head. The authentic Hindu method is as follows: The sari, measuring anywhere from five to seven yards long and about a yard wide, is wrapped around the waist, tied securely in front. The fabric is then draped in equal folds which are tucked into the waist in front. The remainder of the sari is then used to form a bodice on the left shoulder with the end of the sari forming a free-flowing scarf.

The authentic Hindu drape is worn by Mrs. Ghodsee Kia, who is herself a native of Persia, wife of the Persian consul of New York who served during the years 1943-46. Mrs. Kia is now a volunteer at the Asia Institute in charge of exhibitions. Jacquelyn Ross's collection of imported Indian saris numbers over 200 in all and is one of the largest and most beautiful in the world. They range in color from white to rich reds, blues and blacks, and there are several in delicate pastels. The saris will last a lifetime and any woman who is lucky enough to own a Jacquelyn Ross sari gown has it exclusively. Mrs. Ross designs each gown around the pattern of the sari, and since no two saris are alike . . . no two gowns are, either.

At the right is Mrs. Jacqueline Ross who has gained fame from fashioning Eastern saris into modern American dress.

AFTER BILLIONS OF YEARS... NO MOTHS?

FROM the very first whisper of rumor, we have been following the development and growth of the Boconize process, until today it is a proven and accepted mothproofing agent in growing use in the woolen and allied industries. We have been intrigued by its properties, because in the past three decades we have witnessed the rise and fall of many chemical compounds which claimed to cure the textile industry of all evils from loss of profits to loss of hair.

But from every side come nothing but plaudits for Boconize; from even the most grudging research and testing agencies come nothing but limitless agreement with the claims put forth by Bocon Chemical. What, we wondered, is the underlying ingredient which makes Boconize work under all conditions, when other promising formulae flickered briefly and then died out like a firefly in the summer dusk? Our research editors came back armed with so much technical data and diagrams that we begged them to put the explanation to us in simple form. This is it:

Many years ago someone said, "When you see the moth . . . it's too late." That's another way of saying that the damage to textiles, whether of wool or any other animal fiber, is done not when the moth is full grown and flitting about, but by the larvae. The eggs are laid by the female moth in the tiny crevices of a fabric or fur; they mature into larvae there, and feed on the animal fiber to gain sustenance and growth. In the process, they chew the holes and create the bare patches which are the bane of every housewife's life. Once they grow to the size of a moth, they no longer need the fabric for feeding . . . but the damage has already been done.

Obviously, therefore, the place to attack moths is before they develop into larvae . . . by depriving them of the food they need to stay alive and grow. That, our researchers explained to us, is what Boconize does: it chemically permeates the fiber so that it is no longer fit food for the larvae, and they die. The intriguing question now comes to mind: After billions of years, will the world now be free of moths, if every fabric woven of animal fiber is Boconized . . . or will Nature rush its own engineers to the task of readapting the moth larva's mechanism so that it can develop through other foods?

We decided to leave that poser to the scientists of the world, and put forth some other questions:

How durable, we asked, is Boconize; we were shown laboratory tests which indicate that this is a process which is good for the average lifetime of a wool product. It has withstood repeated launderings, and has remained effective even after 25 dry cleanings. Boconize is prepared in two different forms; one for use where the product is to be washed, the other for dry cleanable merchandise.

Can you see Boconize, or smell it, when it is applied? No to both questions. It is colorless, odorless, non-toxic and non-allergic; it penetrates the fiber, and leaves no visible or physical trace on the surface.

Is Boconize dangerous to handle, or hard to handle? Not at all. It is non-flammable, non-explosive; it can be effectively applied by padding, exhaust or spray methods, using the equipment common to most mills and converters.

We spoke with several important mills and apparel manufacturers already using Boconize, and asked them whether they weren't afraid that their markets for the future would be curtailed if moths were eliminated as a consumer. Their unanimous answer was: Why worry about what might happen far off in the future? All we know is that the process works, and that it's helping us to sell more goods.

We suppose that's what really counts. But we can't help wondering how long it will be before some enterprising chemist comes up with a prepackaged food for the poor little doomed moth!

MICA: THE PEBBLE THAT CAUSED A STORM

REPORTER'S RECOMMENDED FUTURE FASHION PROMOTION

Mica — THE NEW CLOTHING COLOR FOR FALL

■ MICA, a very black green tone, taking its name from the natural mineral bearing the same coloring, was introduced for the first time at the annual Fashion Shorum last January, in which it was labeled a "Fashion Future." An electric applause meter registered the response of the 1500-odd retailers in the audience to this new Fall color as thunderous! Since that time, MICA has been incorporated into many textile lines; comes the Fall buying season, it will be included in some form or other in most clothing lines. It will not only be utilized as the basic color for suits, but for topcoats as well.

Why did MICA come into existence? *Because* a survey of men's wardrobes all over the country would find green . . . in any shape, form, or tone . . . conspicuously absent. *Because* green, as such, is unbecoming to the majority of men, either because it is too green-green, or because it is drab and lifeless. *Because* a new smart and becoming suit and topcoat shade can bring something exciting into existence . . . . can boost business . . . can bring in more dollars and cents to the industry as a whole.

Hence the creation of MICA, a green tone so dark that it could not possibly be condemned as being too-green; yet a color which is basic enough to make for smart looking business and semi-sportswear ensembles. A color which is new, yet easily acceptable to the consumer. A color which has great promotional possibilities, both because of its newness and its origin.

Get All Stores Mica-Minded

Store merchants have an opportunity in MICA to strengthen their fashion prestige. Most important, MICA can bring in more dollars and cents. You cannot, however, be successful with MICA if you are the only merchant to show it. But, if everyone in your city shows MICA forcefully, strenuously and intelligently, better business will result. By saying that *every* merchant should buy, promote and sell MICA, we do not mean to imply that the individuality of the retailer is lost in a mass promotional effort. This is not the case.

In a future issue we will tell you how to promote this new color . . . how to sell it and which accessories to sell with it.

Fabric courtesy Hockanum Mills

THE FASHION department of the MEN'S REPORTER NEWS WEEKLY wrote, in the April 4th issue: "Mica — the new clothing color for Fall." They went on to explain why they believed that this new tone, completely different from anything shown in clothing before, could be not only promotable but saleable. Instantly, the Upper Midwest Retailers Association seized on the suggestion; decided to adopt Mica throughout that area, and descended on the manufacturing markets in quest of clothing, sportswear, furnishings and accessories to fit into the Mica classification.

At once the phones started ringing, the mails started bulging with requests from manufacturers whose fashion awareness was not of the keenest: they wanted to know which mills had Mica fabrics in their lines. We supplied the information; but the pebble dropped into the pool had created a powerful wave by now. Mills which had up to then passed by this new color, immediately added it to their lines . . . and wasted little time making it known.

As of this moment, Mica has grown to tremendous fashion importance in the men's industry; further than that, it is being sold in respectable volume. In fact, so widespread is the promotion of Mica today that a special issue of the MEN'S REPORTER NEWS WEEKLY will be devoted mainly to a report on Mica . . . who has it available, in what lines of merchandise. We predict that this color will be a sparking note in the men's wear advertising done by most retailers this Fall.

Here is an example of how the industry had a potentially potent selling idea within its hands, yet failed to capitalize on it until an outside agency spotted the news value and brought it to the attention of the retailer.

FABRIC FACTS

To keep American Fabrics readers abreast of developments in the Textile Field

Compiled by Dr. George E. Linton

A fire-resistant treatment for textile fibers consists essentially of precipitating antimony oxide in the material.

Specific gravity can be determined by placing the unknown liquid under a known vacuum in one leg of an instrument, while the other leg contains water. The difference shows the specific gravity.

A fire-resistant yarn has been developed for tablecloths and similar uses, which is also said to be self-extinguishing, and immune to oil, grease and mild acids. It is also said to be fade-proof, colorfast, waterproof and free from rot.

Vinyon N yarn can be dyed at temperatures of about 190° to 212° F., with dispersed acetate colors in addition to certain of the vat and acid dyes. In addition to these, certain of the direct and phthalic anyhydride dyes can be applied under certain conditions.

One of the main difficulties in producing crimped fibers is to make sure that the crimp will resist removal by wet processing and stretching of yarns and fabrics. This can be achieved by introducing unequal stresses into specially made composite fibers, resembling the natural double fiber made by the silkworm.

While nylon enjoys many advantages over silk, the latter fiber has at least one point of superiority . . . silk may be dyed in an unlimited number of colors with cheap, easily obtainable dyes.

Teasels used to raise the nap or pile of cloth to produce desired finishes on specific fabrics, are superior to steel combs for very fine cloths and for methods in which the nap is raised under damp conditions that may cause steel pins to rust. In addition, steel combs are rigid and do not have the "give" of teasels.

The art of pigment printing has been stimulated by the use of hardenable resin condensates and cellulose derivatives as fixing agents.

Especially in springy fibers, air cells frequently occur in dyeing wool raw stock. These cells may be partially eliminated by proper wetting out and by higher starting temperature of the dye baths.

Wet water is a term used by chemists for water which contains organic chemicals known as wetting agents. These cause a rapid penetrating action by the mixture.

Efficient wool blending depends upon an intimate knowledge of physical, chemical and mechanical properties of fibers, along with the most up-to-date machinery, plus knowledge gleaned from experimentation and research.

Starch is converted into dextrine by steam in the presence of acids. Strong acids, such as thiocyanic, can convert starch into water soluble substances such as glucose.

Viscose rayon normally contains 12% moisture. It absorbs and holds more moisture than cotton, up to the point where it becomes wet, and then is non-creasing.

Aluminum is finding increased use in textile equipment machinery and also in mill construction. Because of its light weight, workability, resistance to corrosion and its strength, aluminum is replacing heavier metals.

A new wool fabric for lightweight and tropical apparel, weighing from two to seven ounces per square yard, has been constructed by blending 95% wool with 5% nylon. The fabric is claimed to be about four times as strong as any wool fabric of similar weight.

For the purpose of obtaining quickly swellable fibers to aid in making cloth less pervious to water, cotton fibers have been partially carboxymethylated. Different degrees of swelling have been satisfactorily obtained.

If a certain point is exceeded in blending wool and rayon, the fabric will be spongy and will lack the feel and crispness it should have. The accepted ratio is 40% wool and 60% rayon. A new blended-yarn cloth is a type of flannel made of different blends, of which the most successful seems to be a type made of 75% regenerated cellulose and 25% wool. The cloth is soft in hand, attractive and serviceable for many purposes.

Black and dark-colored raw stock results in poorer carding, spinning and weaving when compared with light colored, medium or undyed wool raw stock because absorption of large amounts of dye and larger amounts of bichromate and acid necessary to develop shades impairs the tensile strength.

High absorption and polishing qualities have been claimed for dish cloths made from a mixture of asbestos with other textile fibers.

A multi-ply fabric particularly for collars is obtained by weaving a multi-ply cloth with warp and filling of a thermoplastic yarn in an outer ply only, and uniting this ply to a fabric of some desired weave by heat.

Starch substitute can be made by heating seaweed in water at 200° F., filtering and then evaporating to a concentration of 6% by weight of solid matter, and adding by volume 94 parts water to 6 parts of the solution.

Cellulosic material is fireproofed by impregnation with at least its own weight of an aquaeous solution of a condensation product of diciandiamide and formaldehyde prepared in the presence of ammonium phosphate, the resinous body being precipitated by means of alkali.

Good circular knitting is influenced by the winding of yarn on the knitting supply package. Emphasis must be placed on the accurate setting of the yarn-feeding devices. Yarn-feeding tensions must be governed by the type of yarn used.

The primary requirement for a textile size is that it must impart cohesion to insure satisfactory loom operation and good mechanical quality of the fabric. A good warp size should give increased tensile strength, flexibility, elasticity and hygroscopicity to the yarn.

Casein and gelatine have become competitors of starch. In recent years, consideration has also been given to resinous materials such as poly-vinyl alcohol and alkali or water soluble cellulose derivatives since starch has the disadvantage of being difficult to remove and also contributes to micro-organic growth on yarn, if the removal has been incomplete.

Most pile fabrics and carpets are characterized by the fact that their colored appearance, when viewed from one direction, is markedly different than when viewed in another direction, which is particularly evident when the pile surface has become disturbed by use or cleaning.

Silk moths are now being destroyed in cocoons before hatching by being exposed to ultra-short radio waves and hot air.

Vat-dyed wool has superior manufacturing qualities when compared with acid- or chrome-dyed fabrics, and much better fastness properties. Vat-dyed shades, combined with shrinkage control, produce wool textiles of maximum consumer value.

Examination of garments found damaged after discharge printing with hydrosulphite, show that this is caused in many instances, by the formation of oxycellulose brought about by exposure to warm, humid conditions.

Wetting agents improve the wetting action of water but possess little, if any, cleansing action. Detergents possess both wetting action and cleansing qualities, or detergency. A simple washing test on a soiled fabric will show the difference between a wetting agent and a detergent.

Glycerine is one of the textile industry's most useful hygroscopic and plasticizing agents. It is used to increase moisture retention, pliability and softness. An excellent solvent, the viscosity of glycerine also makes it a good suspending and dispersing agent for substances that do not go into solution and, because of its smoothness and "body" it is an excellent water-soluble lubricant.

While acetate rayon dyes can be used for nylon-wool mixtures, these

dyes, however, yield shades which are deficient in washing fastness. Vat dyes on nylon have inferior fastness to light, which fact is surprising in view of their excellent fastness on cotton and viscose rayon.

Sewing threads are usually three single-ends twisted together with medium turns per inch, and, according to quality, either gassed or ungassed. They are rather rough and pliant in texture. Lace threads are usually two ends of single yarns twisted together, with hard twist and gassed, forming a thread which has a smooth, wiry texture.

An experiment is being made to produce a stocking fabric from a mixture of nylon and pure silk. While actual manufacturing processes do not present difficulties, no dye has thus far been formed or found that is suitable for both fibers.

Peroxide of hydrogen is considered to be just about the best bleaching agent for wool since there is absolutely nothing in it which affects wool other than to slightly affect the felting properties.

"Wolline" is a fabric made with a bright viscose ground and a pile of delustered cellulose acetate. Some of the fabric, however, is made entirely of acetate rayon yarn.

Absorption of dyes and their fixation on cotton fibers are largely determined by the chemical constitution and the physio-chemical state of the dyestuff. To some extent, it also depends upon the age and the maturity of the fiber, the removal of impurities such as fats, waxes, pectins and protoplasms, as well as the nature and the amount of any inorganic substances associated with the particular fiber.

A vinyl butyral waterproofing coating is transparent and has a mat-finished surface made with a thin, completely dull top-coating. Even the film must be absolutely continuous and devoid of pinholes or other imperfections. The coating is also resistant to common household stains.

The simplest and cheapest of cloth-drying machine is a set of revolving steam heated cylinders against which the material is pressed. While the cloth progressively gives up its moisture as it passes over this unit, the method, however, is not suited to all types of fabrics because little or no control is provided over cloth dimensions. In addition, cylinder drying will often impart a harsh feel and a certain characteristic stiffness.

Light is energy, and color is a collector of this energy. Light, which also includes color energy in its sphere, gradually destroys colors, and therefore weakly light-fast colors gradually disappear under the influence of light.

Fiberglas cloth is dyed with plain colors by impregnation on a padder with resin into which a pigment has been ground. The fabric is cured at 350° F., to set the resin. Screen printing is also carried out with similar resin and pigment combinations.

There are three practical tests used to identify nylon — yarn-heat, flame and solubility. Under the heat test, the fiber is heated at the edge of a flame below the ignition point, and if the fiber fuses to a hard, rounded bead which gives off the white vapor of an amide odor one may be assured that it is nylon. Incidentally, the odor is like that noted from celery.

In the so-called flame test, it is noted that nylon will not support combustion after being removed from the flame.

In the solubility test nylon fiber is insoluble in acetone but will dissolve in a 90% solution of phenol.

Dyeing of highly stretched yarns of almost all types, and including acetate and viscose rayons, show that stretching decreases the affinity for dyes. This should be considered as detrimental to higher tensile strength which the stretching produces.

Among the saponifiable fats and oils, oleins are particularly suitable for lubricating purposes because their unsaponifiable content does not exceed 23% and their iodine numbers should be considered as low.

The best method of finishing rayon consists of a preliminary calendering treatment after which, to prevent shrinkage, it is treated with a sulphonate bath. After dyeing and drying, treatment with a finishing agent which contains a soupling compound follows. A good soupling compound is sulphonated alcohol.

A transparent or organic effect may be given to fabrics by impregnating them with a solution or emulsion of an alkylated urea-formaldehyde resin. The resin is fixed by heat after the material has been dried.

Printing fabrics which have been vat-dyed generally results in a reducing effect on the vat dye which renders it almost colorless. One of the most effective oxidizing agents is a perborate used in an acid bath.

When dyed under the same conditions, a deeper shade of color is developed on mercerized rather than on un-mercerized cotton. This condition may be caused by a reduced dye penetration.

Synthetic detergents have special importance in relation to wool scouring in that wool is adversely affected by scouring liquors which are too alkaline in nature. When using these synthetic detergents, the addition of 6% sodium carbonate is generally recommended.

The most satisfactory textile softeners are based on natural oils and waxes. Substances, such as olive oil or paraffin wax, for example, can be applied and will give good results; they are fairly easy to remove by simple washing. It should be borne in mind, however, that it is necessary to make them into derivatives which have not only softening powers but also strong affinity to the material in question; the affinity should be comparable with dyestuffs used on the goods.

Soap is the oldest and the most widely used anionic surface acting agent but quaternary ammonium compounds which are cationic agents are finding a place in the industry. While glycol fatty esters, or non-ionic agents are relatively new, they are nevertheless finding wider application at present. The ester is the product formed from the reaction of an acid and an alcohol involving the loss of water. For example, ethyl acetate derived from ethyl alcohol and acetic acid.

The latest "synthetic silk" is made from kelp found along the shores of oceans. This "sea silk" is completely fireproof and will not burn when soaked in gasoline. Its metallic content makes it much too heavy to compete with nylon in hosiery although it can be developed for use in general decorative materials.

The average person has the tendency to overestimate the weight of dark-colored objects and to underestimate the weight of light-colored objects. They are also inclined to underestimate the temperature of a blue-tinted room, but will invariably overestimate the temperature of a red-tinted room.

The use of protein fibers such as Ardil, Lanital and Vicara in mixtures with viscose rayon staple fiber, creates a new field in fabric manufacture. The materials, light in weight, seem to possess some of the characteristics of the heat-retaining properties of woolen materials.

Wool and silk have high recovery power from creasing, whereas cotton and particularly linen readily crease. Cellulosic and cellulose derivative rayons such as viscose and acetate rayon, are readily creasable. Acetate rayon is less affected by crease marks when compared with viscose rayon.

To obtain satisfactory results when printing on vinyl film, bonding must take place between the film and the ink. Pigments are recommended in the procedure.

The strength of rayon increases with twist up to a critical point after which it will gradually decrease. Break resistance of low-twist yarn depends upon the strength of the individual filaments, all of which will break at the same time. In yarns of higher twist, exterior fibers undergo the severer test and therefore will be the first to break.

Hydrosulphite, used in textile processing, is of limited stability. It will soon lose its reducing quality if not stored carefully or allowed to remain too long a time exposed in air. Tests should be made from time to time to ascertain the actual strength of this chemical.

In converting procedures, the term "reserve" or "resist" implies a substance which prevents the dye from being absorbed by the fiber. The reserve or resist is printed onto the material after which the cloth is piece dyed, leaving the printed areas unaffected. The method is usually employed for white patterns on a colored background, although the resist procedure, if further developed, can be made to give one or more colors of motif different than the "ground color" of the goods.

The action of light on wool will cause undesirable alteration in the physical properties of the fiber such as swelling, marked shrinkage, harsh feel and lessened tensile strength. These changes may even occur while the wool is on the animal's back. Light will affect the tips of the hairs which are most exposed to sunlight.

Crompton-Richmond's Valois, a silk back velvet with Viscose rayon pile. Cyanamid crush-resistant finish.

VELVET, FABRIC OF ARISTOCRACY SINCE DAYS OF ANTIQUITY, BREAKS THE TRADITIONAL SPIRAL OF FASHION RENAISSANCE

Students of the psychological and economic aspects of fashion are keenly aware of the spiral pattern through which every fabric, every color, every silhouette must travel; those who can forecast in uncanny manner almost the very minute when a fashion will reach its peak, when its decline will begin . . . are puzzled over the pattern being traced by Velvet. In many instances the spacing between repetitions of a fashion's spiral, and its life span, are almost identical. In other words, emotional or world conditions might dictate the return of a certain fabric to popularity every 30 years; it might run its course for 4 years, and then hibernate for three decades before repeating its pattern.

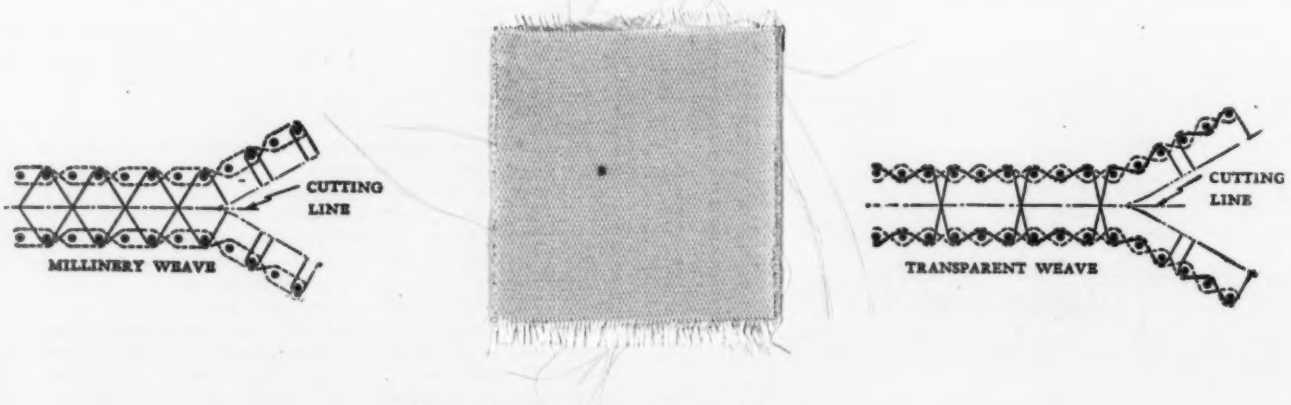
But Velvet has, in recent times, accelerated its speed of repetition; and bids fair, due to technological developments, to shatter the traditional time span of its life. But before we delve into this aspect, let us review the rich historical background of Velvet in a brief manner:

Truthfully, Velvet has no clearly definable history or date of birth. We can but gain a glimpse into Velvet's past by noting such facts as the word "kathifet" in the Arabic language, used for centuries in Arabian literature, to denote Velvet; allusions to Velvet in written matter pertaining to India, Japan, China as well as Greece, and dating back to the time when the world centered around the Mediterranean and the Orient.

In the opinion of a number of experts, Velvet undoubtedly had its origin somewhere in what is now China and then spread its influence along the route travelled by Marco Polo and the caravans of historic days, till it reached Greece and Rome. Much is made of Velvet in the writings of those times, but it took on not only figurative but literal regal approval in the Middle Ages. Velvet became, at that time, the official fabric for both court and church. It was used to make clothing for the royal families; for church vestments; for high church authorities.

In France, Blue Velvet was for a time reserved for the exclusive use of the King's family. It was a special mark of favor when the King permitted one of his subjects to attire himself in this cloth; but as time went on and more subjects attained both wealth and power, the use of Velvet in attire became more general. By the time of Louis XIV, the use of Velvet for both clothing and draperies was fairly widespread.

It must be borne in mind, at this point, that up to this time



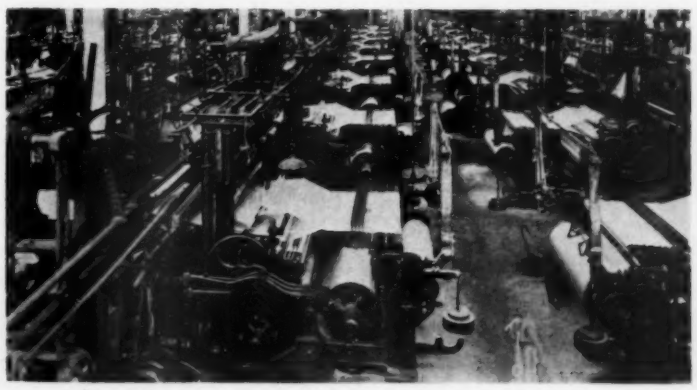
Uncut velvet — courtesy Martin Velvets

in its history, Velvet was loomed on crude hand apparatus and entirely of silk. Weavers had no knowledge of ways to attain the rich sheen, the fine pile, the luxurious hand of Velvet save with silk. The one notable exception stemmed from Amiens, where the Velvet weavers worked with goat's hair to loom what was known as velours frappes. But the first really broad development into the use of various fibers did not come till comparatively recent years. Today silk is still used importantly; but to the roster have been added cotton, nylon, rayon . . . in numerous combinations which have given Velvet an almost limitless horizon of uses.

Velvet was for centuries a fashionable fabric for gentlemen. It can be restored to male favor with the assistance of good designing.

In addition to the introduction of new fibers in Velvet we must acknowledge the addition of new techniques in both weaving and finishing as a major reason for the current consumer interest in Velvet. Velvet is no longer the fragile orchid to be seen but not touched; nor is its face forever unlined. Today Velvet has countless faces; today Velvet has crease-resistance, crush-resistance, water-resistance to tempt the taste of the penny-conscious consumer of today.

Technologically, Velvet has truly brought luxury within the grasp of the masses, without sacrificing the veriest mote of its aristocratic appeal. For this reason we believe, with a number of eminent authorities in fashion, that Velvet may well burst through its traditional spiral of expected fashion life . . . and become a hardy perennial of the industry.



Modern velvet weaving plant — photo courtesy A. Wimpfheimer & Sons.

Martin Leonora, cotton-back coating, fast pile. Cotton and acetate content results in a high degree of crush resistance.

Martin Nylovel, first all-nylon velvet has immense durability. Flame proof, naturally crush resistant and completely washable.

Wimpfheimer Glamorvel, new all-rayon Lyons type, traditional Boulevard quality, cravanetted and treated for crush resistance.

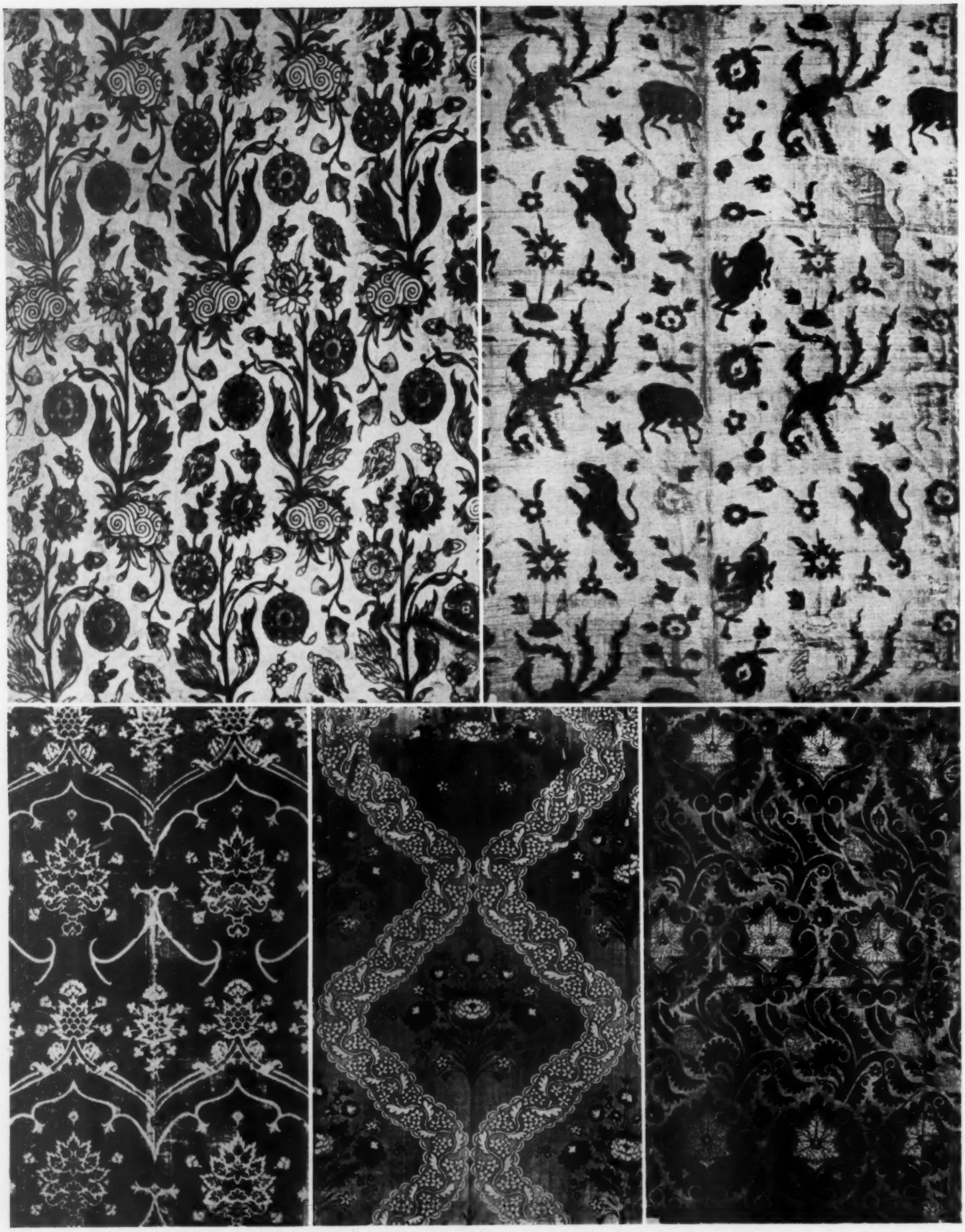
Crompton-Richmond Nantua, cross dyed stripe in heathery effect. Rayon back and viscose pile; Cyanamid resin crease-resistant finish.

Crompton-Richmond Garonne, pin checked couture type with pure silk back, viscose pile. Cyanamid resin crease-resistant finish.

Martin Elektra, all-rayon Lyons type combining luxuriant density with securely locked pile and crush resistance.

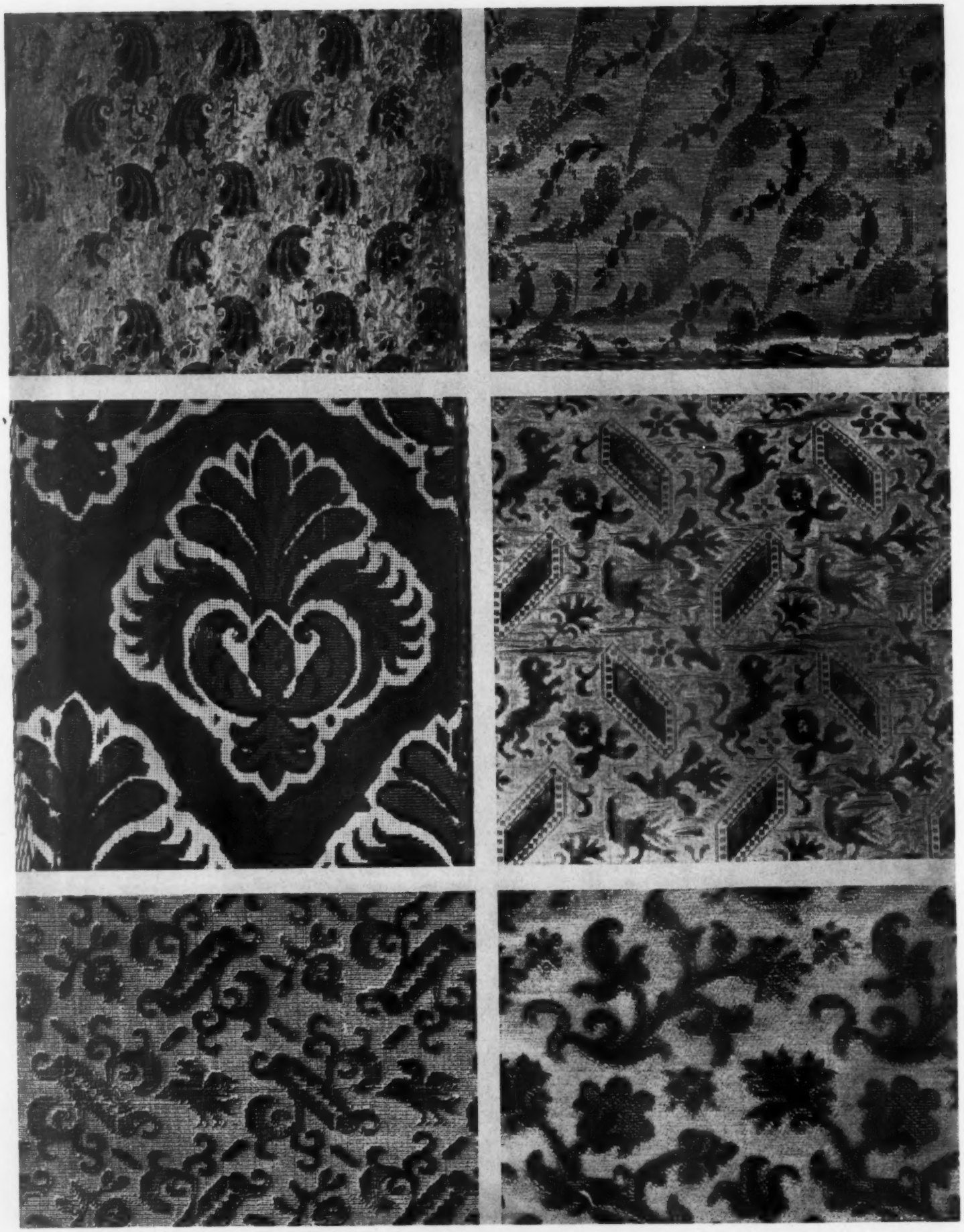
Wimpfheimer Original Boulevard Velours Du Nord, fifty-four-inch cotton and silk coating type, rich in texture.

Wimpfheimer Vel De Lux, light and sheer rayon-and-silk velvet textured for delicacy as well as washability.

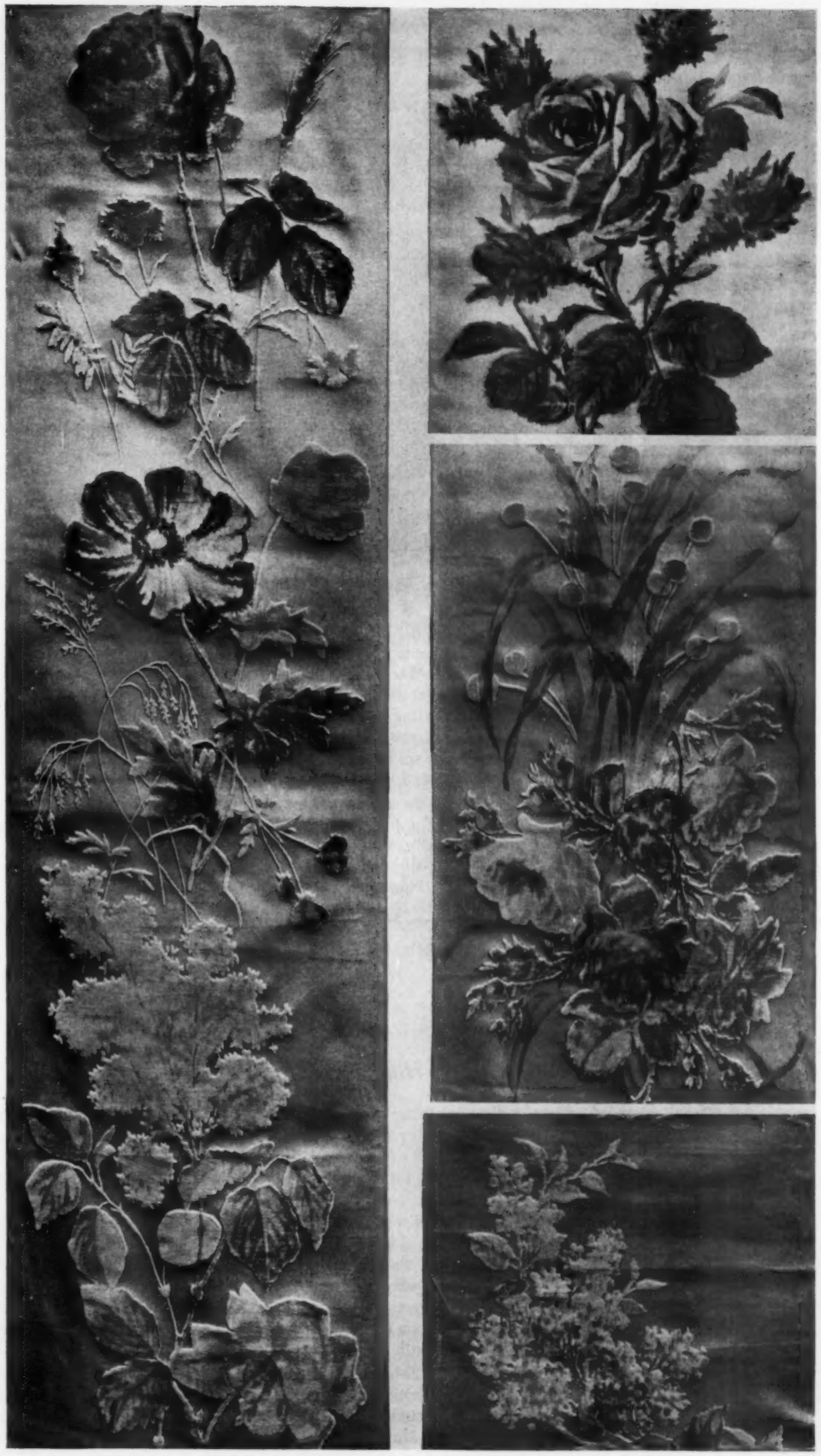


Historic velvets from the Musee Historique de Tissus, courtesy Chambre de Commerce de Lyon

Brocaded velvet coats, gold embroidered, XVIII century



Brocaded velvets of the XVI-XVII century



Velvet ribbons — collections Gauthier-Rebour

Velvets • END

American Fabrics Forum

Why Not A Textile Library?

Throughout the fabric centers of Europe it is commonplace equipment in every office to find a huge and lush library of textile ideas going back to the very beginnings of this industry. We have often pondered this matter, and wondered why it is that American textile firms have passed by this method of collecting usable ideas.

It is, therefore, interesting to note that one man in America . . . Milton C. Blum . . . has gone to great lengths and great expenditure of time and effort to compile such a library, which occupies a major area within his offices.

He has succeeded in gathering up specimens of fabrics dating back from yesterday to a period of many centuries back. From each era he has culled the outstanding examples of artistry in color, in weave, in pattern. It is a never ending source of inspiration not only to his own design staff, but to the designers who work for the manufacturers to whom Mr. Blum sells fabrics.

We should like to see this idea expanded throughout the industry. As we have said repeatedly: the textile industry of today can learn much from the pages of textile history.

On Whose Shoulders?

The inclusion of a letter to the editor, in a recent issue of the MEN'S REPORTER NEWS WEEKLY brought a flood of mail from the retailers and manufacturers of men's wear, on the matter of consumer complaints which arose after garments had been dry cleaned. The consumer blamed the store; the store blamed the cleaner; the cleaner blamed the mill . . . and the mill took the blame because there was nobody to whom the cross could be shifted.

Perhaps the most intelligent letter came from a young man who had been a dry cleaner before opening his own men's shop, and could therefore write with sure knowledge. He pointed out that, until the advent of synthetic fibers, garments could be cleaned in soap and water without worry over shrinkage or damage; but that with common use of manmade fibers including everything from skim milk to soya . . . not to mention the almost countless blends . . . the dry cleaner is frequently at a complete loss over how to clean the garment properly.

Shrinkage in cleaning, he pointed out, is due to these causes: use of re-used wool, loosely woven fabrics, moisture in the solvent, tumblers that are too hot, heavy steaming during pressing, moisture in spotting, improper use of dry cleaning soap, and atmospheric conditions. It is obvious, in this list, that as many causes beyond the mill's control can cause unsatisfactory cleaning results, as stem from the fabrics themselves.

Perhaps, the writer pointed out, mills should be more aggressive in acquainting both retailers and dry cleaners with the true content of each fabric, with suggestions for cleaning, to preclude as much as possible the consumer's dissatisfaction after the damage has been done. This makes good sense.

How Far Should Art Reach?

There is little to say in refutation of the credo that the American textile industry should give prominence to fine art in its designing. As a natural extension of this sound belief, the very advertising which speaks for the textile industry must reflect that understanding of art.

The advertisement reproduced here is shown because we feel the entire textile industry, and not Shirley Fabrics Corp. alone, should be proud of the fact that the Art Directors Club of New York selected the advertisement as worthy of receiving the Award for Distinctive Merit in Magazine Art. At the Museum of Modern Art, where the numerous contesting entries were hung, recognition was speedy and enthusiastic.

So, to the Shirley Fabrics Corp. which had the vision to approve this advertisement to the Harry Serwer advertising agency which conceived it; to the textile industry which reflects such fine work . . . we add our salute to that of the Art Directors Club.

CONSUMER CAUTION AT THE PIECE GOODS COUNTER

Today's customers are showing a definite interest in the performance and care of the fabrics they buy, it has now been found when New York University School of Retailing's Bureau of Retail Research released the results of a point of sale survey entitled "What the Consumers Want to Know About Fabrics."

The survey, conducted for the American Viscose Corporation and made under the direction of Mrs. Karen R. Gillespie, assistant professor of retailing, and Dr. Lawrence C. Lockley, director of research at the University's School of Retailing, covered 823 customer contacts. While this was not a very large sampling, according to Dr. Lockley, it was considered sufficient to provide data indicative of consumer education needs.

Of the customers questioned, 57.5 per cent had specific comments or asked questions about fabrics indicating that a large majority of retail customers do want to know certain facts about fabrics. In order to determine what facts were needed and how they were related to specific fabrics and merchandise the study was tabulated in three ways. First, by questions asked, regardless of type of merchandise of fabric. Second, by the frequency of questions in relation to the different fabric types, and third, by the frequency of questions in relation to specific merchandise.

The first tabulation of questions asked about fabrics in order of frequency showed:

	No. of Questions	Approx. %
Performance (How it will wear)	184	35
Care of Fabric (Wash, dry-clean, iron)	99	19
Fiber content	99	19
Cost and value	62	11.5
Appropriateness of fabric to use and occasion	43	8.5
Fashion	9	1.5
Brand	8	1.5
Miscellaneous questions asked	21	4
Total	525	100%

An interesting note in the above tabulation, the survey found, was the low percentage of comments on fashion in connection with fabrics. One explanation, the report stated, might be that such a thorough job is being done by retailers on fashion that customers need no further information.

In tabulating the percentage of questions asked by types of fabrics, the study revealed:

	Wool	*Rayon**	*Cotton***	*Misc.: Straw, etc.*	*Total*
Total No. Questioned	194	221	76	34	525
a. Performance	27%	38%	48%	35%	
b. Care	5	31	21	15	
c. Fiber Content	33	10	9	18	
d. Cost or Value	17	6	13	17	
e. Suitability	13	4	5	12	
f. Fashion	1	3	0	0	
g. Brand	1	2	3	0	
h. Miscellaneous	3	6	1	3	
	100%	100%	100%	100%	

** Also includes silk and nylon.*
*** Also includes linen.*

An analysis of the above figures showed several interesting relationships. For example, in buying cotton fabrics the consumer showed less interest in care than she did in buying rayon fabrics. An explanation of this, the report stated, may be the customer's long familiarity with cotton fabrics and handling methods as compared with treatment of the new varieties of rayon fabrics that are constantly being made available and requiring different handling.

The third tabulation according to frequency of questions asked by type of merchandise disclosed:

	Yard Goods	*Blouses*	*Lingerie*
No. of customers recorded*	104	105	53
% of customers asking questions	74%	66%	48%
Types of Questions:			
a. Performance	30%	29%	39%
b. Care	18	46	39
c. Fiber Content	9	16	7
d. Cost or Value	10	1	0
e. Suitability	28	0	0
f. Fashion	2	6	3
g. Brand	1	0	9
h. Miscellaneous	2	2	3

** Of the 468 customers asking questions, 262 did so in these departments. The others were so widely scattered among the various departments (i.e. hosiery, dresses, suits, coats, sportswear, accessories and home furnishings) that the tabulation would not have been significant.*

As a result of the survey, it was found that the customer wants to know specific facts about a fabric. Will it shrink? If so, how much? She also wants to know how to care for the fabrics she buys. Among the various fibers, the customer has requested more information in the rayon category than in any other indicating that there is where the competitive-minded retailer should put special emphasis. Finally, the report reveals, if an in-store sales training program on fabrics is planned, it would seem important to begin with the yard goods department, with blouse and lingerie departments as second and third choices.

APPROXIMATE AVERAGE YARDAGE ESTIMATE

Type of Garment	Size Range *Junior 9 to 17 Thirteen* Yards	*Miss 12 to 20 Fourteen* Yards	*Women 36-42 Thirty-eight* Yards	Plus or Minus-Tolerance Yard
Dresses	36"—3¼	36"—3½	40"—4	⅛
Ensemble (Two piece suit)	39"—3¾	36"—4	54"—2½	¼
Suits	36"—4½	54"—2¾	40"—4½	¼
Skirts	36"—2¼	36"—2½	36"—2¼	¼
Jackets	54"—1¾	54"—1¾	54"—2	¼
Coats	54"—2¾	54"—2¾	54"—3	⅛
Capes (Long)	54"—2¼	54"—2⅝	54"—2½	⅛
Nurses Uniform (Maids)	30"—3½	36"—3⅛	40"—3¾	⅝
Aprons	36"—3¼	36"—3¼	36"—4	¼
Smocks	40"—2⅞	36"—3⅛	36"—4	⅛
Hoover Aprons (Wrap Around)	36"—3¾	36"—4	36"—4	⅛
Blouses	39"—2	39"—2	39"—2¼	(22 yards to the Dozen)
Ski Suits (Jackets)	36"—2¾	39"—2¾	36"—3¼	⅛
Slacks	36"—2¾	36"—2⅝	54"—2½	⅛
Snow Suits	54"—1¼ (1 to 4)	54"—1¼ (3 to 6x)	54"—1¼	(Children Sizes) (plus 7 to 14 Cut in dozen lots)
Beachwear (Play Suits)	36"—2¾	36"—3¼	36"—4	¼
Bathing Suits (Full Cut)	39"—3	39"—3½	39"—3¾	¼
Bathing Suits (Knitted) (Stocking)	44"—2	44"—2¼	44"—2½	⅛
Theatrical	Varies, because of color and fabric combination.			

STAMPS IN TEXTILES

The commemorative stamp of the Old Slater Mill brings to public notice the fact that governing bodies throughout the world have for many years honored the textile industry with such documentary recognition. The Old Slater Mill in Beverly, Mass. has been operating continuously for 160 years; but the history of textiles goes as far back as Man's mastery of writing.

Miss Ruth Beedle of Charlottesville, Virginia, has spent years collecting stamps issued by various countries in honor of the textile industries. A partial and interesting group taken from her collection which has been on display at the Institute of Textile Technology in Charlottesville, Virginia is presented on these pages.

The cotton belt of the world lies between 40° north to 30° south latitude. Most of the Soviet cotton is grown in Russian Turkestan in the latitude of Chicago; here the collective farms produce about 89 percent of the cotton, the state farms 5 percent and the independent peasant farmers 6 percent. In 1944 experiments were made in producing tinted cotton.

The most perfect specimens of cotton fabrics known are those found in the desert graves of pre-Inca Peru. No people in the history of fabrics, in any part of the world, have ever achieved such high technical skill or excelled them in conception of design, composition, or the use of color, their standards being even beyond our latest achievements. Each of the two varieties of cotton grown in ancient Peru possessed some special merit which has been kept as distinct types to the present time. Peruvian cotton ranks high in quality and its average yield of 510 pounds of lint per acre is excellent.

Since America was the main source of supply of cotton for almost a hundred years following the invention of the cotton gin, it was only natural that England should turn to the American colonies for its supply. Had this demand not come when it did, the history of the United States, especially that of the agricultural South, might have been vastly different.

Cotton is today one of our chief forms of wealth, quoted on every bourse of the world, a great agricultural staple, a great industrial factor. There is perhaps no other single commodity that has had such a determining effect on the world's history.

Cotton in its growing season of about 200 days requires a peculiar combination of climatic conditions. In its early stages the plant requires a hot, moist climate, without abrupt changes of temperature, warm nights, and frequent, but not heavy, rains. After the plant is mature and the bolls have begun to form, it needs clear, dry weather, though not excessively high temperatures.

The oldest cotton fabric so far discovered comes from the ruins of Mohen-Jo-Daro in the Indus valley and is dated around 3000 B.C. The earliest literary record of cotton, also of Indian origin, is found in the "Institutes of Manu," of 800 B.C.

Sea Island cotton, indigenous to the West Indies, was introduced into South Carolina in 1786 and was grown so successfully on the islands off the coast that the planters gave it the name, Sea Island. The activities of the British Cotton Growing Association are largely responsible for the present success attained by growers of this choice variety in Montserrat and other islands.

Owing to the superiority of the Egyptian cotton, growers in other countries have bought the seed and attempted to produce cotton of equal quality but with little success, as soil and climatic factors limit the adaptation of cotton varieties. Egypt supplies almost half of the world's long-staple cotton, which is exported to all the major consuming countries.

CORREOS DEL PERU
SERVICIO AÉREO
30 CTS
INDUSTRIA LANAR - EJEMPLAR DE LA GRANJA MODELO DE PUNO.
WATERLOW & SONS LIMITED. LONDRES

The Merino is the undisputed king of the species where fineness of fiber is concerned. This breed was originally the product of crossing the native sheep of Spain with the fine-wooled sheep of early Rome. The fleece of the Merino grows tight and dense; the fiber is very fine with numerous distinct and uniform crimps. The length of the fiber is short, ranging from 1 to 4 inches, shearing from 10 to 25 pounds of wool annually.

In olden times it was unlawful to export the Merino sheep from Spain, the only person exempt being the king, who presented some to the king of France. These were kept at the royal farm at Rambouillet and thus began the Rambouillet strain. Shown in the stamp is a wool type of sheep which is larger and more rugged than the Merino, with a coarser and longer fleece.

The Llamas are the New World members of the camel family. Four distinct species of llamas exist today in the Pacific coastal regions of South America — the llama and alpaca are the domesticated members and the guanaco and vicuna are the wild members. The male llamas, used as burden carriers, are never shorn and the hair is permitted to grow to form a cushion for the one hundred pound pack.

In 80 A.D. the Romans introduced wool-weaving into England, when these invaders, finding the weather cold and damp, established a wool-weaving mill to make warmer clothing. The weaver's guilds, the first of which was formed in 1080, became a strong power in British affairs. From the eleventh to the eighteenth century the rulers gave increasing attention to the wool industry.

Long wool sheep are primarily mutton sheep; they are the largest breed, with rams weighing from 250 to over 300 pounds. The fleece hangs in long, definite curls or locks and grows open and loose on the body as compared to fine and medium wool. The fiber is long — 5 to 14 inches, and coarse. One of the most popular wool breeds is the Romney Marsh.

The scriptures often mention flocks of sheep and the shepherds. Wool was no doubt the first fiber used by man as clothing, worn first in the form of a pelt; later the fibers were felted into a fabric and finally they were formed into yarns from which fabrics were constructed. The first small flock of sheep was brought to Jamestown, Virginia, from England in 1609.

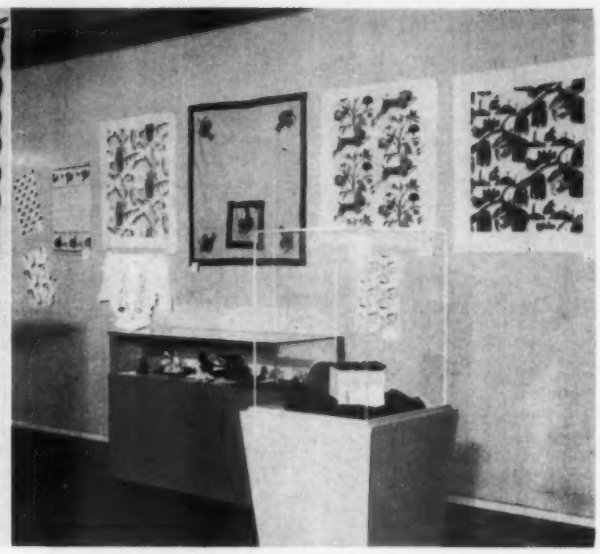
The guanaco is larger than the alpaca or vicuna but smaller than the llama. Since the animal is scarce and exceptionally wild, guanaco fiber is limited and of small commercial importance. The cloaks of the native Indians of Patagonia are not woven from the hair but are actually the whole pelt.

Corriedales have been developed in New Zealand since 1880 from Lincoln or Romney Marsh rams and Merino ewes. The type is intermediate in size and weight, between the Lincoln and the Merino, and while the fleece possesses some of the softness and fineness of the Merino, it has greater length. Corriedales are popular with the western range growers of the United States.

The long wool type of sheep such as the Blackface Highland can be grown on land too damp or too low for other sheep because the long hard wool sheds the water very readily. However, these large sheep grow best on level pasture land.

A small segment of the auditorium where throngs of students exhibited their talent in design. Live shows ran at intervals.

One of the newspaper announcements of the contest run by Stix-Baer-Fuller.



Contest entries were displayed on walls and in cases so that the many parents and interested consumers could study them.

AT WHAT LEVEL SHALL WE SEEK TALENT?

PART TWO

THE PREVIOUS issue of AMERICAN FABRICS related the first step in the broad program initiated by American Silk Mills to interest and develop talent from the ranks of the highschool age group. In this issue we carry the story into an exposition of an actual instance wherein Amer-Mill, in cooperation with Scholastics Magazine and a fine store in St. Louis, succeeded in obtaining the live interest and enrollment of a sizeable body of young boys and girls.

The program started with exhibitions by 1,375 highschool students in the auditorium of Stix, Baer & Fuller on Saturday, March 5th. On Monday evening, March 7th, the public was invited to see the exhibits, and to watch a series of demonstrations . . . opaque water color painting, silver jewelry making, clay modelling, sketching and block printing . . . by members of various local schools.

The work of the 98 students who received gold achievement keys went to Carnegie Institute for national competition; the 281 entries from students who won places were gathered for a regional show. It is interesting to note that 57 schools, not only in St. Louis but extending as far north as St. Claire and Madison Counties in Illinois were represented. Local newspaper publicity plus invaluable word-of-mouth advertising helped to spread the story of the contest through many thousands of homes.

It is to be assumed, logically, that the splendid work done by Amer-Mill's executives in tandem with the representatives from school faculties, must bear healthful fruit for the textile industry. By the time the national finals are judged, two things will have accrued to the benefit of this industry: (1) millions of Americans will have gained a clearer appreciation of the high level at which textile design has been placed and (2) we will have gained recruits for the ranks of inspirational talent. On both counts we salute all those involved in making this program such an active and stimulating industry aid.

letters to the editor

CONSUMER WANTS TO KNOW

To The Editors:

I have been a subscriber to your magazine for the past year and have renewed my subscription for 1948. I want you to know that I have thoroughly enjoyed this magazine and two of my workers in the state have subscribed to it through seeing my magazines.

I would also like to know if there would be any objection to us using some of the material from time to time that you publish in this magazine. We contact over 10,000 rural women in Colorado and these women are interested in knowing about new fabrics and finishes. It would help us considerably to use some of the material that you put out in your magazine.

Helen Prout
State Home Agent
U. S. Dept. of Agriculture
& Home Economics
State of Colorado

S. A. TO FRANCE VIA U.S.A.

To the Editors:

I enclose herewith a Christmas gift subscription order for my brother (Mr. Jacques Sperry, c/o, Est. Millet Boivin, 123 Rue Montmartre, PARIS (2°)— FRANCE), for the year 1948 but at the same time I wish to know if all the four 1947 numbers could also be sent to him as a Christmas gift in which case in receiving your confirmation I would send you the amount required.

A. E. T. Sperry, Director
Hirschberg Tejidos
Soc. Anon. Argentina Comercial
e Industrial
Buenos Aires

TEXTILES ON TOURS

To the Editor:

I thought that the enclosed schedule pertaining to the travelling exhibitions of American Textiles —'48 would be of interest. The following museums are showing the one hundred exhibits of contemporary American fabrics which were assembled by the Metropolitan Museum of Art to demonstrate the quality of weaving, and good use of design and color:—

July — San Francisco Museum of Art
August — Portland Art Museum
October — Worcester Art Museum
November — Massachusetts Institute of Technology
The American Federation of Arts
Mrs. John A. Pope
Assistant Director

MORE ON SILK

To the Editors:

The fine article about silk in the last issue available at the Metro-Museum Reading Room was of special interest for me.

But I missed in the article, with its summarizing of the cultural importance of silk, any remarks about the importance of diseases of the silkworm . . . the diagnosis and prevention of which is a part of the immortal work of Louis Pasteur. Pasteur was director of the physiological-chemical laboratory of the Ecole des Haute Etudes as the "Pébrine" in 1868 endangered the whole sericulture of the South of France; sericulture was at that time one of the most important branches of the French industry and national economy.

In dramatic efforts extended over a time of 5 years Pasteur discovered the cause of the ruinous disease and the means of its prevention and thus became the saviour of the French silk industry 20 years later as he became the victor over the always deadly disease of rabies.

I thought perhaps your readers could be interested in a presentation of Pasteur's fight against the imminent destruction of the French sericulture and I would be glad to find your interest for such a paper of mine.

With history of medicine as my hobby for long years I was lecturer of History of Medicine at the College of Medicine, University of the Philippines from 1939-46.

Since April, '46, in New York, I published some med. hist. papers here the last 2 in Merck Report, Oct., '47 and April, '48.

Walter K. Frankel, M.D.
Jersey City, N. J.

MORE ON VISIBILITY

To the Editors:

Today, in looking at your splendid Issue No. 9 I noticed an interesting paragraph on Page 48. This paragraph states that green has the greatest legibility of any color on a white background, and notes that a motor fuel company ran a test on their gas station signs in which that fact was proven.

Because of our past experience in the gas and oil field, and our continuing interest in it, I wonder if you might enlarge on the details of this test. What company was involved? When was the test run? Would it be possible for us to have a copy of the test results?

It may be that you can't answer some of these questions, in which case perhaps you could refer this letter to Mr. Ketcham, himself.

William C. Brangham
Botsford, Constantine & Gardner
San Francisco, Calif.

MAURICE RENTNER NOTES

To The Editors:

My appreciation for art that is well done prompts me to write this note to you.

Looking through your American Fabrics, Number Nine 1949, I was truly fascinated to see a magazine specializing in and executing so comprehensively an idea; that is, to illustrate fabrics to look in design and quality almost as they really are.

It appears that your magazine has done research in order to inform the trade of *what is being well done in the fabric market.*

The result of your efforts is such that I could not help but comment on how well you have accomplished your objective, and it is evident that not only have you done research on the fabrics, but you also have merchandised them as well.

My sincere appreciation.

Maurice Rentner
Maurice Rentner Inc.
New York, New York.

FIRST HONORS

Dear Sirs:

I copied this short article from a recent British textile magazine, just on the chance that you might not have seen it. How nice that, though Great Britain issued the world's first postage stamp, and the English have always been leaders in the textile field, American Fabrics will carry off the honors of textile-philately.

Fibers and Philately

A correspondent inquires whether fiber industries have been subjects of pictorial representations on postage stamps. We agree that the subjects should lend themselves admirably to such a use. One would have thought that British West Africa would have made good employment of sisal in this way, and the Philippines of abaca, Ceylon of coir, and India of Jute. However, the only fiber which Messrs. Harmer Rooke & Co., Ltd., by whose courtesy we give the present illustration, can think of as having enjoyed philatelic distinction is cotton. The Egyptian Government issued a series to celebrate the International Cotton Congress of 1927 and apparently the Argentine Government has also brought out a cotton stamp; but this we have not seen.

It now remains for enthusiastic philatelists to point out omissions from our brief list.

— Fibers 10:120, Apr. 1949.
Ruth Beedle

REAL ACHIEVEMENT

To The Editors:

. . . As you must yourself know this book (American Fabrics) is a real achievement, and one which we are very proud to have in our office.

Jarvis Cromwell
President, Iselin & Co.
New York, N. Y.

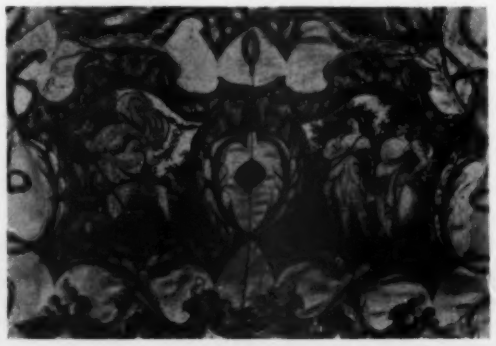
INDIA ON TEXTILES

Dear Sirs:

It may interest your readers to know that the Calico Museum of Textiles is the only one of its kind in India, and is open to the public. It is sponsored and supported by the Calico Mills. The Museum has several sections, each one devoted to a particular branch such as handmade textiles, machinemade textiles, embroidery, etc.; each section shows the entire process at different stages.

It has a valuable collection of antiques which were in vogue hundreds of years back. Among other amenities, the Museum is airconditioned and has a reference library with artificial lighting to prevent textiles from fading in sunlight.

Curator,
Calico Museum of Textiles



JUDGMENT SEAT

To the Editors:

Apropos your article on the Judgment of Paris, I thought you would be interested in this embroidered chair backing of the same subject.

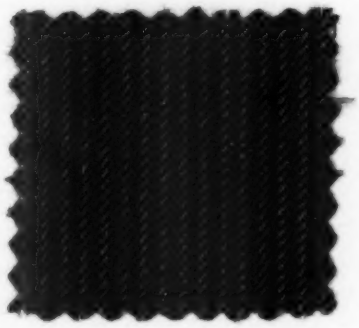
H. G. Martin
New York, N. Y.

AMERICAN FASHION FABRICS PORTFOLIO

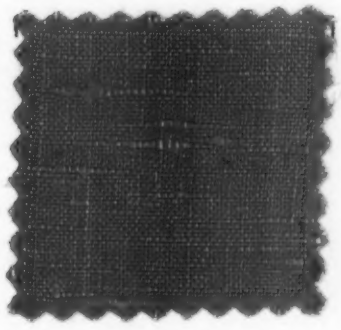
Fashion Begins with the Fabric . . . and in this specially swatched Portfolio, American Fabrics brings you some of the season's current Fashion Fabric Hits . . . Fall, 1949.

Cerey Mellospun Tweed, soft and supple, yet bold in design, has fine draping qualities.

Cohama's Witchcraft . . . all-acetate blend of two distinct colored yarns creates a changeable satiny tone.



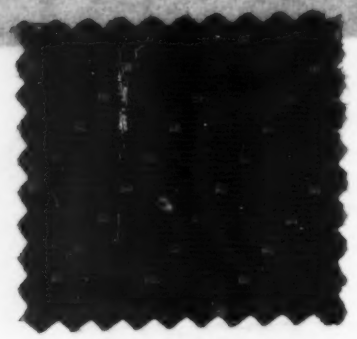
Hockanum's two-ply eleven-ounce all worsted suiting in a novel stripe for richly tailored effects.



Moygashel's Shantel . . . a fine-quality slubby effect pure linen, crease resistant and color fast . . . for cutters and over-the-counter.

Juilliard Twill Cord . . . new vat-dyed rayon and combed cotton corduroy; the rayon gives lustre and added wrinkle resistance.

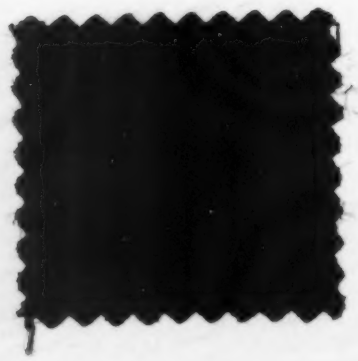
Kokette by Mallinson . . . a new epingle weave for dresses, blouses and better lingerie.



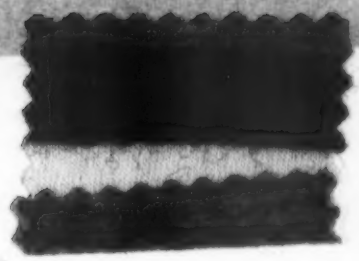
Amer-Mill Ascot, a bright seasonal note, features an all-rayon faille with diagonal dots.

Starlight . . Stotter's new novelty rayon faille, with Lurex metallic stripe, in better dresses and retail departments.

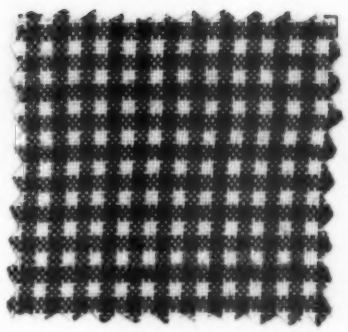
Castleton's Patterned Magic, a designer's choice, satin jacquard.



Verney's Taffy, a shadow jacquard taffeta of blended acetate and yarn dyed rayon.



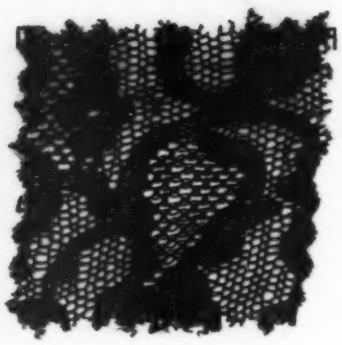
Carefree Stripe . . . Wyner's new note in all worsted jersey, an interesting ombre pattern. Sag-No-Mor finished.



Hoffman of California . . . a check of Avisco crimped staple both yarn and vat dyed.

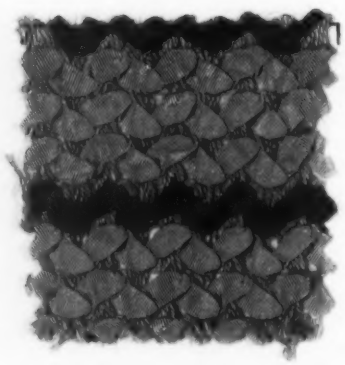
Guaranteed fast-color spun rayon by Dumari; Tebelized for crease resistance and added strength.

Miron's Miroque original styling in a red-and-black check. 100% worsted, 10½ oz. suiting weight.

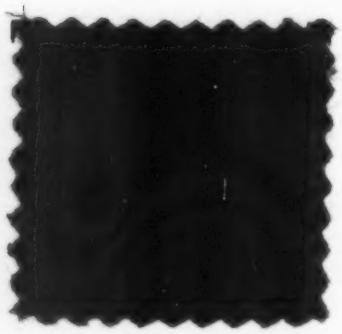


Ametex . . . all-nylon Goddess Lace. A Chantilly type that cuts to fit since it does not shrink.

Belco's Macotex blouse fabric of long-staple Egyptian combed cotton. Sanforized and vat-colored. For better piece-goods departments.



Wave-striped Ribbonit, by Chester Ross, woven of continuous strips of ribbon, giving hand-knitted appearance.



Vicara . . . a new blend by the Virginia-Carolina Corp. makes up 40% of content. Balance is 55% wool and 5% cashmere.

Great Wave off Kanigawa . . . by the Japanese master Hokusai (1760-1849)

EVERY-MINUTE ZEN

Zen students are with their masters at least ten years before they presume to teach others. Nan-In was visited by Ten-No who, having passed his apprenticeship, had become a teacher. The day happened to be rainy, so Ten-No wore wooden shoes and carried an umbrella. After greeting him, Nan-In remarked, "I suppose you left your wooden shoes in the vestibule. I want to know if your umbrella is on the right or left side of the shoes."

Ten-No, confused, had no instant answer. He realized that he was unable to carry his Zen every minute. He became Nan-In's pupil, and studied six more years to accomplish his every-minute Zen.

* * *

TRADING DIALOGUE FOR LODGING

Provided he makes and wins an argument about Buddhism with those who live there, any wandering monk can remain in a Zen temple. If he is defeated, he has to move on.

In a temple in the northern part of Japan, two brother monks were dwelling together. The elder one was learned, but the younger one was stupid and had but one eye.

A wandering monk came and asked for lodging, properly challenging to debate about the sublime teaching. The elder brother, tired that day from much studying, told the younger one to take his place. "Go and request the dialogue in silence," he cautioned.

So the young monk and the stranger went to the shrine and sat down.

Shortly afterwards the traveler rose and went in to the elder brother and said, "Your young brother is a wonderful fellow. He defeated me."

"Relate to me the dialogue," said the elder one.

"Well," explained the traveler, "first I held up one finger, representing Buddha, the enlightened one. So he held up two fingers, signifying Buddha and his teaching. I held up three fingers, representing Buddha, his teaching, and his followers, living the harmonious life. Then he shook his clenched fist in my face, indicating that all three come from one realization. Thus, he won and so I have no right to remain here." With this, the traveler left.

"Where is that fellow?" asked the younger one, running in to his elder brother.

"I understand you won the debate."

"Won nothing. I'm going to beat him up."

"Tell me the subject of the debate," asked the elder one.

"Why, the minute he saw me he held up one finger, insulting me by insinuating that I have only one eye. Since he was a stranger, I thought I would be polite to him and hold up two fingers, congratulating him that he has two eyes. Then the impolite wretch held up three fingers, suggesting that between us we only have three eyes. So I got mad and started to punch him, but he ran out and that ended it!"

TEXTILE EDUCATION IN AMERICA

(*PART ONE*)

FIBER . . . weave . . . dye . . . color . . . construction. How much knowledge is required to supply the demands of the largest industry in the United States? In terms of employment, our first American industry is indeed Textiles and Apparel, engaging over two million people in the production of the finished fabric which is the raw material for the "cut-make-trim" apparel trade. In the wholesale value of products, textiles is second only to the food industry with a yearly business of $7½-billions. In view of the economic value of this fabulous industry and the amount of technical, scientific and artistic knowledge which it demands, just what is being done to educate and prepare young men and women to find interesting futures in the textile industry?

Inquiry reveals the fact that there are nine textile schools and colleges in the country granting B.S. degrees in the field, four institutions which grant masters' and doctors' degrees in textile science, engineering or research; and a host of other colleges and schools which give courses in textiles without having degree-granting power. The United States Government is attempting to augment the available knowledge in textiles by maintaining twelve agencies, bureaus and departments engaged in research associated with the textile industry.

Beginning with this issue of AMERICAN FABRICS, the editors are proud to present the first of a series of articles on the textile colleges, schools and institutions which have done so much to foster all things textile. We are gratified to refer to the reader first hand information on two of the foremost institutions in the field of textile learning . . . The Philadelphia Textile Institute and the Rhode Island School of Design. (*please turn page*)

THE P.T.I. EDUCATES TOMORROW'S EXECUTIVE

Director B. W. Hayward

Dean Richard S. Cox

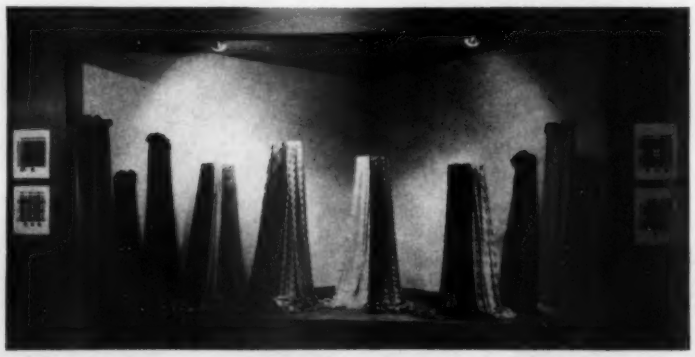
"A textile executive needs technical training as well as an understanding and knowledge of the problems he faces," claim successful leaders in this field. The scientific advances, refinements in machinery and the contributions of chemistry make it almost impossible for a young man to rise to the top in the textile industry without a good educational foundation. In addition to all of these particular problems in his field, the executive must be prepared to cope with problems of labor relations, public relations and community as well as industrial affairs. To meet these strenuous demands of the modern business world, American education must utilize its academic and vocational facilities to prepare the young student for the world he will face as a young businessman.

Many students who enter the business world after having been trained from a purely academic point of view find themselves unsuccessful in meeting the demands for technology which industry requires. This does not mean that all colleges and schools should offer purely technical courses; but it does mean that, in some way, educational institutions should attempt to fulfill the demands of the industrial world, as well as the purely academic aspects of education.

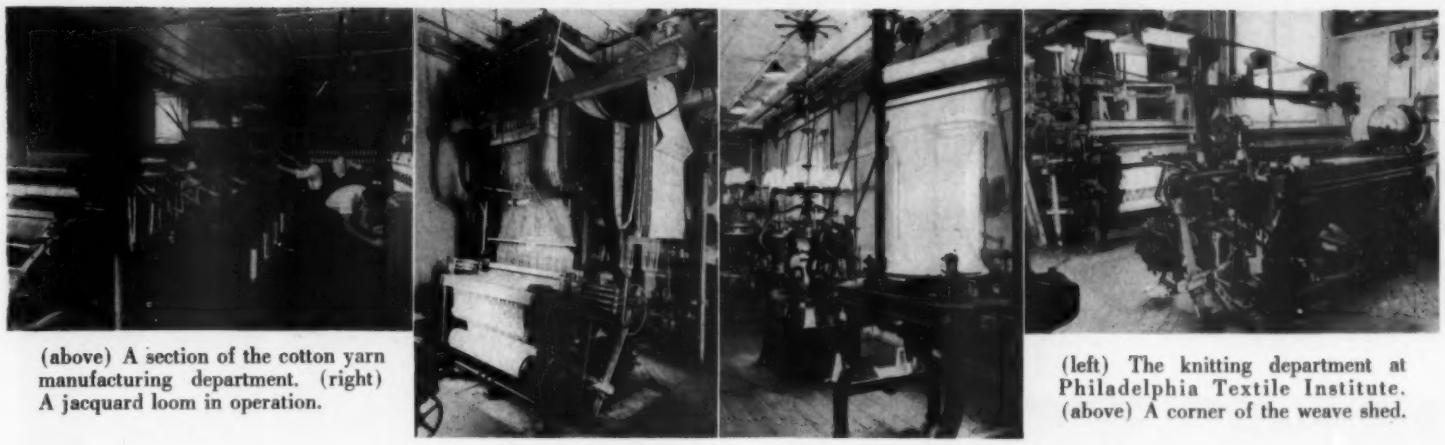
Students who enter the Philadelphia Textile Institute generally have clear ideas as to what educational program will best fulfill their objectives. The Institute aims to present the fundamental principles of textiles as well as the technological skills which are essential and unique to the industry. Students are encouraged to recognize the problems they must face and develop individual methods of attack in order to solve them as effectively as possible. The Institute attempts to blend purposeful specialized training along with the general education necessary to develop the total personality of the student.

Leadership demands an alertness to the possibilities for improvement in the textile processes, as well as an understanding of human relationships and ability to promote cooperative attitudes. The great criticism of liberal education has been that while it prepared an individual to enjoy a full life it did not provide him with the skills and competence necessary to support such a life in the modern industrial world. On the other hand, too specialized training has in the past developed individuals competent to earn a living, yet blind to social forces and ignorant of civic responsibility.

Artist's concept of the new building, ready in September



These are specimen fabrics actually woven by PTI students



(above) A section of the cotton yarn manufacturing department. (right) A jacquard loom in operation.

(left) The knitting department at Philadelphia Textile Institute. (above) A corner of the weave shed.

The Philadelphia Textile Institute is attempting to remedy this situation by combining a specialized training course along with the common knowledge which is considered the foundation of a liberal education. In order to ensure the practical value of its course of study the Institute recently conducted a questionnaire among business leaders in order to find out what requirements and expectations were demanded in their organization. Through this medium they hoped to find out the abilities, skills, attitudes and knowledge with which their students should be equipped before they come to a job.

EDUCATION IN TEXTILES AND CLOTHING AT R.I.S.D.

Success in the textile and related industries requires an appreciation and understanding of the principles of style, color and design which play a larger part in this industry than in most others. Recognition of the peculiarities of the raw material, natural and man-made synthetics from which the textile products are manufactured is essential. Educational preparation must inform the student that his first concern is with taste and needs; his second with the chemical and physical characteristics of fibers; and, finally, the completed fabric. Training therefore must include study of design, science, manufacturing techniques and the basis of sound economics.

The division of textiles and clothing of the Rhode Island School of Design offers majors in textile manufacturing, chemistry and coloring in the engineering field. The design category offers majors in textile design and in clothing as well as fashion. The student is shown how the entire industry was affected as natural fibers were supplemented by synthetic products such as rayon, nylon, glass, plastics and other chemically prepared materials. The rapid development and application of new products create unlimited opportunities for young men and women with the aptitude, imagination and training necessary for positions of leadership in this industry. It is the aim of this school to provide the essential requisite of training and attempt to encourage imagination and initiative, two of the qualities for original and responsible leadership. Each student receives not only professional training in subjects peculiar to his field, but also a carefully integrated program of academic and general professional subjects.

William D. Fales
Dean, RISD Textile School

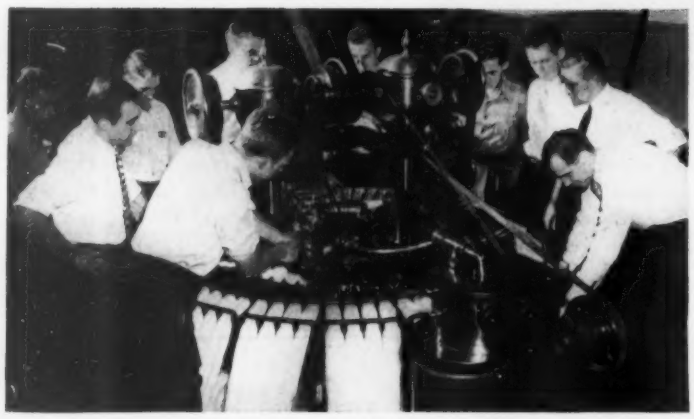
Nelle Weymouth Link
Head, Clothing and Fashion Dept.

The school is equipped with modern machinery of commercial proportions which makes possible actual experience in the manufacture of yarns and fabrics from the raw material through the finished product. The objective of all curricula is to educate and train young people so that after earning their degrees they may enter their jobs or professions and grow within them to positions of responsibility and leadership. This objective is being met at the Rhode Island School of Design. (*please turn page*)

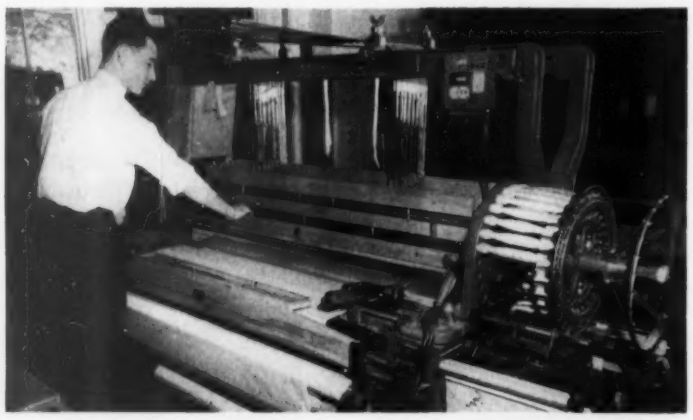
LEADING TEXTILE SCHOOLS AND INSTITUTIONS THROUGHOUT THE COUNTRY

1. Alabama Polytechnic Institute, Auburn, Alabama
2. Bradford Durfee Technical Institute, Fall River, Mass.
3. Clemson College Textile School, Clemson, S. C.
4. Georgia School of Technology, Atlanta, Ga.
5. Institute of Textile Technology, Charlottesville, Va.
6. Lowell Textile Institute, Lowell, Mass.
7. Massachusetts Institute of Technology, Cambridge, Mass.
8. New Bedford Textile Institute, New Bedford, Mass.
9. North Carolina State College, Raleigh, N. C.
10. Philadelphia Textile Institute, Philadelphia, Pa.
11. Rhode Island School of Design, Providence, R. I.
12. Texas Technological College, Lubbock, Texas
13. Fashion Institute of Technology, New York City
14. Fairleigh-Dickinson Junior College, Rutherford, N. J.

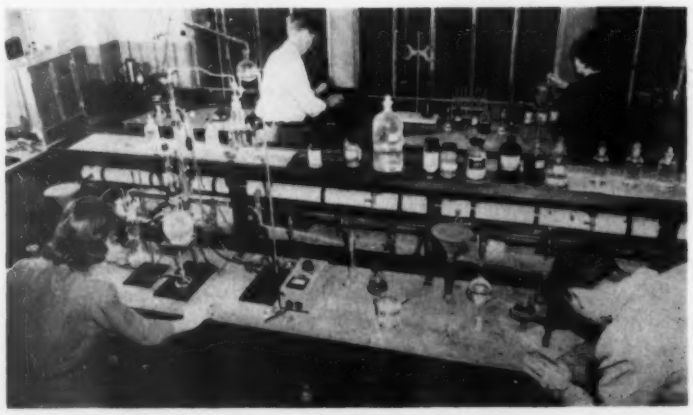
EDUCATION IN CLOTHING AND TEXTILES AT R.I.S.D. (continued)



Timing, setting and operating a Noble comb in the worsted yarn department.



Starting up an XD Draper automatic rayon loom, one of six recently installed in the weaving room.



Chemical research in the organic laboratory. A study of dye exhaustion with the aid of the Spectrophotometer, and the synthesis and evaluation of synthetic detergents.

Two students in the textile design course printing ten yards of material, a step in the designing and printing of a decorative fabric for draperies.

Costume creation in the clothing and fashion studios. Students working on numbers which will be included in their spring lines.

The Textile Building, one of the twenty-four units at the Rhode Island School of Design, in Providence.

For a continuation of this series of articles depicting the fine progress made, with the cooperation of the textile industry, in developing young people of talent . . . watch for additional material in American Fabrics Issue Number Eleven, in September.

SETTING SILKS BACK ANOTHER DECADE?

READERS of past issues of AMERICAN FABRICS are aware by now that we firmly believe that there is a definite and important place in the textile sun for silks. Studies conducted among consumers, retailers, cutters and trade bodies have convinced us that not only is there such a niche, in competition with man made fibers, but that even the truly miraculous test tube developments of the past decade have yet to unearth a fiber which can replace silk in certain products and for certain uses; even the fully unleashed power of American promotion has not shaken loose woman's admiration for silk as the ultimate mark of luxury.

It is, therefore, distressing to discover that in their anxiety to capture the waiting market certain individuals, trade groups and even Government agencies have been reckless enough to place on the American market merchandise made of such obviously inferior quality that at the present moment the mere mention of the word silk is threatening to become anathema to the consumer, the retailer, the cutter and finally the converter.

Such large quantities of merchandise . . . men's sport shirts, women's dresses, lingerie, drapes and upholstery . . . have been returned by the consumer to the store, by the store to the manufacturer, that it will be a long time before either of these parties will listen with favor to proposals on behalf of silk. What, actually, has been discovered to be the root of the trouble? It is twofold: FIRST, the first importations of silk from Japan included a high percentage of yarn which has been lying in Japanese warehouses for as long as ten years. Since silk is an animal fiber, subject to deterioration, it was only natural that finished products made of this aged silk proved tender under strain, and fell apart under normal conditions of wear and tear. The hosiery industry which had eagerly awaited the return of silk since V-J Day found, to its dismay and loss, that they had moved too fast and too far without examining their ground; hosiery woven in good faith, promoted and sold at sizeable expense, came back across the counters and to the mills.

SECOND, another large importation of silk . . . and this more recently . . . proved inferior in quality. Knowing that the stocks of old silk yarns had been disposed of many months ago, American mills were puzzled as to why the silk failed to stand up in use. Only through dogged investigation did they finally discover that they had been buying silk yarns derived from dead cocoons; that the fiber had been undergoing a deterioration process even before it had been boiled out of the cocoons!

Let us start on the premise that the parties responsible for these debacles were guilty of neither foreknowledge or intent in launching on the American market silk products which had basic weaknesses. The fact still remains that, through carelessness or ignorance, the American consumer and the American retailer today are extremely wary of silk. True, they have great faith in the names of certain mills; they know, through experience and instilled teaching, that those mills stand faithfully behind their products. But why should it be necessary to use their prestige almost as a club in overcoming sales resistance . . . when, normally, it should require less time and money and effort to reintroduce silk in certain fields than to sell a manmade fiber?

Silk is a precious fiber . . . but its honor is even more precious, and requires the strictest of guards. That is why the industry, that segment of it which looks to silk for a rebirth as a volume and profit producer, must be most careful in scrutinizing the handling of the fiber from the very mulberry tree from which the cocoon is suspended, to the dye vats. It would be worse than a pity if this precious portion of the textile industry were to be so mishandled that we would lose the luxurious aura of silk, the profitable aspects of silk, and the competitive spur it provides for other fibers in seeking to emulate and surpass its appealing qualities.

THE CONSUMER

The millman, the converter, the apparel manufacturer, the retailer, the retail clerk . . . all throw at Mrs. Consumer words and phrases as selling blandishment . . . all assuming that she knows what they're talking about. Sadly enough, it's gibberish to her. And so writer Cora Carlyle gathers a group of typical

Q. Just why does a garment wear out? This sounds simple but I've often wondered, why.

A. A garment wears out because of one, or both of two reasons: i. e., mechanical or chemical damage. Mechanical damage includes the rubbing, stretching, tearing and other deleterious actions to which a fabric may be subjected while chemical damage may be produced by action of sunlight, perspiration or the various chemical solutions in which the fabric may be immersed during processing or subsequent cleanings.

Q. What fabrics are affected by damp weather?

A. Any fabric that, by nature, absorbs moisture is affected to some degree by damp weather. Woolens, for example, have the ability to evaporate moisture from damp weather. And these fabrics do this about as quickly as they absorb moisture; hence, woolens are ideal for damp weather beyond the question of a doubt.

Q. What is meant by "teaseling a fabric?"

A. The teasel is a thistle-like plant which originally grew wild and is now cultivated because, to date, there is no counterpart able to equal the delicate barbs in strength and fineness.

The head of this plant is set into a machine which rotates and really "teases" out the fibers into a napped surface formation. This action produces a soft-felling material, and at the same time, softens the outlines of the colors in the pattern or design. The same effect cannot be achieved by the wire points on clothed rollers used for this purpose to produce high nap on fabric.

Q. Is a cedar-lined closet a sure protection against moths?

A. Cedar has no magical properties according to the United States Bureau of Entomology. The only safe way is store your clothes in a properly conditioned vault or put them away at home — after a thorough dry cleaning — in a SOLID cedar chest which is in good condition and can be tightly closed. Of course, flake camphor and similar compounds do no harm when placed in the chest.

Q. I send my clothes to the best dry cleaner in the neighborhood; but still there is a distinct cleaning fluid odor on them when they are returned — or, at least, I think that is the origin of the odor. It is sharp and pungent. As I wear these clothes, the odor becomes more apparent, no doubt caused by the heat given off by the body. The clothes appear to be well cleaned. Do you think I should complain about this odor?

A. According to the National Institute of Cleaning and Dyeing, a properly dry cleaned garment will have no odor either when you receive or when you wear it. They say that if all the soil has been removed there is no way for any odor to become apparent.

The cleaning fluid has been completely evaporated by a current of warm air during the cleaning process. The presence of any so-called "dry cleaning" smell indicates that soil has been left in the garment or that the cleaner failed to remove the impurities from the solvent.

Q. What is Sanforlan?

A. This is a new process which controls the shrinkage of wool knitted fabrics. It is also claimed that the fabric treated will not mat or felt, even after repeated washings. Standards and requirements for this process are set up by Cluett, Peabody & Co.

Q. What can I do about belts on my dresses which come back from the dry cleaner withered, stiff, in short — ruined? The cleaner says that it is not his fault.

A. The cleaner is correct in stating that the fault is not his; he should have, however, refused to put the belts through the cleaning process. And, some cleaners will take a chance with practically anything and trust to luck that the article comes through in first class condition. He gambled with your belt and lost. You lost, as well.

The simple story is that the backing on many belts will not withstand immersion in the cleaning fluids used today. The persons to blame, you may think, are the dress manufacturers who add the belts to the dresses. You may be correct in this thought but it should be borne in mind that these manufacturers do not have direct contact with the consumer and so do not come a cropper of the complaints. Possibly you do not take your complaint to the store where you bought the dress; if you do, however, you should take up the problem with the buyer and not the salesperson. This is the only way you can register an opinion that will count.

Q. Why do nylon circular knit hosiery keep their shape, whereas rayon circular knit hose will become like a straight tube after washing?

A. Nylon circular knit hose, also known as seamless and bare leg, are put through a special process which sets the shape permanently. The shape is retained for the life of the hose.

Q. What is furfural and of what importance is it in textile manufacturing?

A. This is a new chemical process developed from corncobs, cottonseed hulls or bran of oats and rice for use in the making of nylon. These agricultural by-products are the sources of a chemical known as Furfural — some mouthful when you say it quickly.

WANTS TO KNOW...

Mrs. Consumers from time to time . . . asks them what they'd like clarified in textile terms . . . and then fires the questions at Dr. George Linton. Here is the sixth batch. The moral is: Just because you know what you mean, don't take it for granted that the other person does.

Q. What is meant by the term, "String Gloves"?

A. String gloves are made from a comparatively coarse, loosely twisted yarn, knitted into a mesh-type glove fabric. The yarn used resembles actual string — hence the name. Fiber content may be cotton, rayon, silk, wool or linen.

Q. Am I correct in thinking that thick rayon slips and panties wear better than the sheer types?

A. Formerly the rayon fabrics used in lingerie were thick and bulky. It is now possible however to make rayon fibers thinner and much stronger than ever before. The new sheerer type fabric will wear much better than the old type.

Q. Although most good stores provide rooms for fitting bras and slips there seems to be few departments where gowns, robes, pajamas, housecoats and other lingerie can be tried on and fitted. These items are sold by size and bust measurement but must frequently be altered at home or returned. Has this inconvenient system been recognized at all?

A. Many of the better lingerie departments are beginning to realize that this method of selling is "chaotic and obsolete." Some stores are planning lingerie fitting rooms which may set a trend.

Q. Are pearl buttons preferable to plastic ones?

A. Both types have their advantages. Pearl buttons are cut from actual shells and have a natural luster and an iridescent appearance. They are ideal for use on garments which must be laundered frequently, since they stand up under water, heat and pressure. Plastic buttons can be made in innumerable colors and designs and can give a very decorative touch to a garment. Care must be used with some plastic buttons not to touch them with a hot iron. If washed often some plastic buttons will either fade or swell.

Q. Is it possible to purchase plastic film by the yard and sew it on with a sewing machine?

A. Yes. Be sure to use a coarse thread and a large stitch. Feed the film in evenly and steadily without pulling or stretching. Buy the type of plastic film that is fire retardant.

Q. Do seamless stockings made of nylon fit better than those made of rayon?

A. Seamless nylons will fit better than seamless rayon stockings because the shape of the calf, ankle, foot, etc., is permanently "set" by heat during manufacture. Seamless rayon hose become shapeless on the first washing while nylon will continue to hold their shape.

Q. What causes tiny pinholes at regular intervals along the selvages of yard goods?

A. They are made by tiny, upright pins which are used to hold the fabric out to the prescribed width while it is being processed in manufacture, chiefly in the drying treatment. The holes do not impair the serviceability of the cloth and they are not a defect in the goods.

Q. In the fashion ads I read of "iridescent." The term is applied to rayons and cottons and when I see these fabrics I note that one gets a different color effect at different lights. How is this actually done in cloth?

A. The warp or the lengthwise yarns of the fabric are of the one color, and the filling or the crosswise yarns are of another. Thus, the color effect you see depends on the reflection of light from the fabric as it is folded and manipulated. You might even see both colors at once, hence, the term "iridescent" or "changeable" appearance.

Q. A saleslady showed me a girdle made of nylon taffeta, but it looked so lightweight that I was afraid it would not be durable nor give good service. What do you think?

A. Nylon taffeta is particularly durable to washing, perspiration and general wear. In addition, it has the advantage of being such a sheer fabric that it does not add any bulk to your figure when you wear it. Some other fabrics are strong, but they are also thick and, incidentally, will add inches to your silhouette; this is something, I know, you do not desire.

Q. I saw some sheer marquisette curtains which are labeled Fiberglas "Coronized." Will this type of curtain shrink?

A. No, indeed. These curtains will not shrink. Further, you can wash them with ordinary care with excellent results. You will find that these curtains will stay clean-looking longer because the basic fiber does not absorb soil. Hence, the surface dirt that in time will gather on these curtains is easily washed off. You can wash the curtains at home by hand or by machine, or send them to the laundry. Also, these curtains will not burn nor rot, sag or wrinkle. No ironing or stretching is necessary. And, they can be hung while still damp. An excellent buy!

Q. Is it too soon to ask if silk sewing thread is back on the market? I have noticed that silk dresses and lingerie are now being sold, hence, the question.

A. Yes, silk thread is definitely back in circulation. As an accustomed user, you know that it is outstanding for its strength, elasticity, ease in threading and passing through the machine. Also, it may be now purchased in all the fashionable colors.

IS THE INDUSTRY NARROWING ITS OWN HORIZON?

WITHOUT seeking to determine or even discuss the relative merits of any one individual who may have fallen neath economy's axe in the past six months, the editors of AMERICAN FABRICS would like to go on record as stating flatly that the practice of eliminating the fashionists and promotion executives in the textile industry can lead to damaging and dangerous results.

We cannot agree that mills and converters who engaged such people from 1941 through 1948 did so solely because they felt that it was as good a way as any of disposing of excess profits; or that the executives of these companies permitted these individuals to arrange fashion shows, press shows, cocktail parties and junkets did so solely because of the gaiety involved; or that the money was spent on talent and materials because it was the fashion to do so.

AMERICAN FABRICS believes, knowing most of the textile leaders, that each program was launched because these people involved felt that they could thus build a foundation of soundness which would help their companies hurdle the adjustment period which had to come sooner or later; that a bulwark of *ideas* was the best protection they could throw up against the ultimate attack of *price*.

As we stated at the beginning, we have no wish to discuss the individual merits in each case, nor the individual circumstances which may have dictated the decision to scrap all fashion and promotion forces, as an economy move. Sitting on the sidelines and observing detachedly, we state candidly that in some cases we would have scrapped the plans even before they were initiated . . . or we might have put them under the direction of more capable personnel. But also viewing the matter from an industrywide stand, we feel quite strongly that the American textile industry may be cutting a hole in its own dike by the prevalent trend toward do-withoutism in fashion.

For a time we felt that the dismissals were merely sporadic; that as in other phases of life, the fittest of the fashion people would survive. But as time unfolds, we find that even those who are acknowledged to be of true talent are being let out. May we ask: WHY?

It is not enough to explain this trend away on the grounds of forced economy. It is not reasonable to say that an industry producing close to seven billion dollars' worth of merchandise cannot afford the relative pittance involved in fashion work. There must be a more basic, a more believable reason . . . and we dread having to hear that mills are again stripping for a fight for business on the basis of an eighth-of-a-cent.

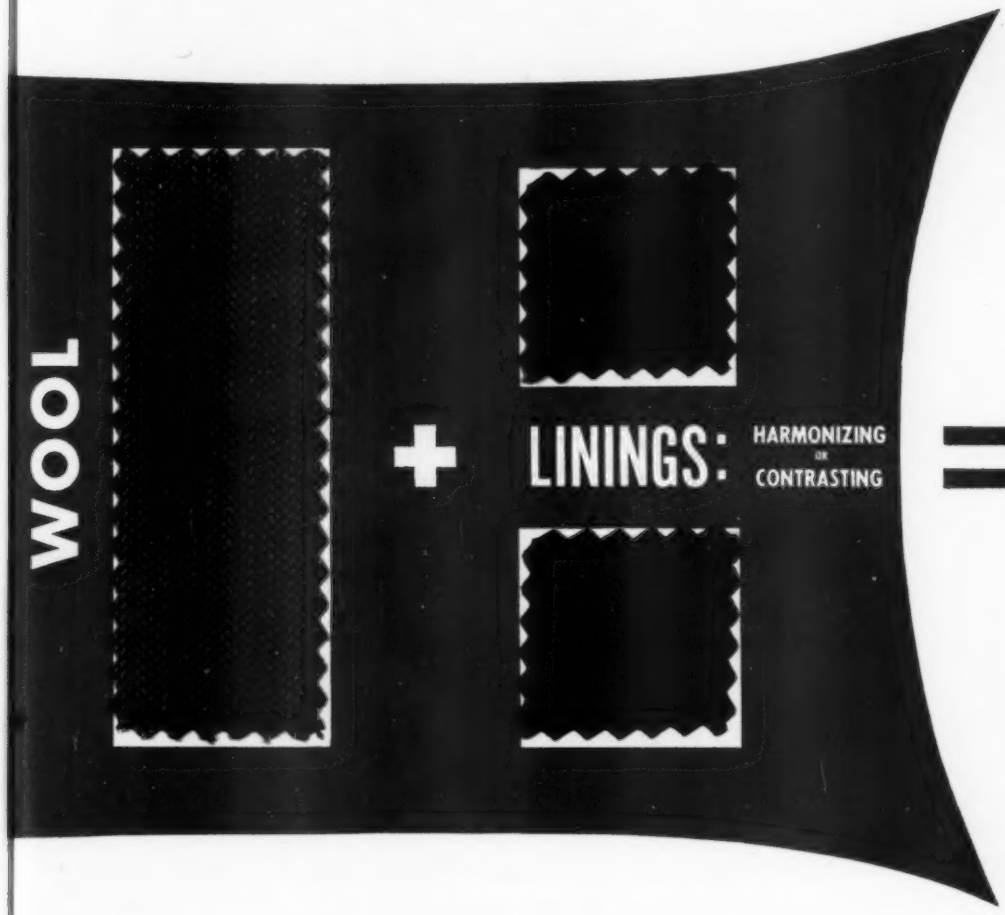
It is not as though the nation were gripped in the throes of another serious depression, when the makers of fabrics had to compete with the makers of bread for the consumer's few pennies. This is still a smoothly running industrial economy; the consumer may resist overpriced goods, but retail sales indicate that she is certainly spending at a comfortingly high rate when she gets what she considers value. And what is value? Is it to be measured in terms of dollars alone . . . or will we accept the fact that new ideas, new ideals will as easily satisfy the consumer's value-hunger as a reduction in price?

In the field of soft goods selling is a matter of emotion more than of logic. Color is emotion. Pattern is emotion. Promotion is emotion . . . and used properly, presented soundly, they combine to make up a force which moves masses of merchandise. If mills try to base their appeal to the cutter, the retailer or the consumer on technological features; if they revert to the prewar tactics of trying to sell their product on the base of a few more threads or a little more expensive dye, or a slightly lower price . . . then we shudder over the prospects of future profit statements.

Make no mistake about this: we are editorializing now, as we have since our inception, for only one thing . . . a higher level of operation. Having lived through one cycle which saw virtually every mill in America producing at a loss because it was the prevailing fashion to forget everything but price, we believe mills have no choice but to try another path . . . strewn with *ideas*.

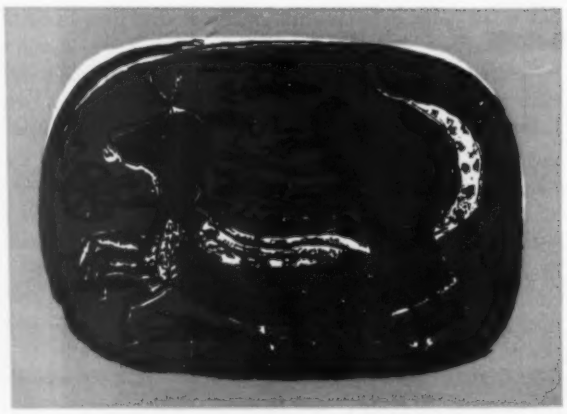
WHEREIN PIECE GOODS SELLERS CAN SELL MORE THROUGH IDEAS:

THE THOUGHT — A practical adaptation of the recognized fact that the American woman is ever alert to new and fashionwise suggestions, and that sales can be stimulated by showing her how to work within the borders of fashion's framework.



THE APPLICATION — Piece goods departments would, we believe, increase sales by grouping woolens and worsteds together with harmonizing or contrasting linings. Each will complement the other, thereby ensuring the sale of both.

Fabric swatches and colorphotos courtesy Milliken Woolens.



Braque, the Great French Master, Dares To Do the Unusual in Color and in Design

THE NECKWEAR INDUSTRY MUST CONTINUE TO BE DARING

IN CHRONICLING the history of the neckwear industry, the past three years will go down in the books as a period of great daring and ingenuity on the part of tie manufacturers. Riding the crest of the bold-tie vogue the industry developed such different designs . . . used color so excitingly . . . that like a great wave a period of unprecedented prosperity spread over the neckwear field.

Realistically, leaders in the field know that there must at some time come a consumer lapse of interest in the current types of tie design; and yet these leaders fight against the prospect of a return to the neats, the dulls, the deadlies of yesteryear. For in that direction, they know, lie the doldrums. The last few years have proved that the consumer is vulnerable to the new, the different . . . but after the panel tie, *what?*

In a field where a premium is placed on novelty, the leaders believe that the quality of daring can continue to be the industry's greatest asset, its strongest selling force. The upsurge initiated by daring panels can be maintained . . . if the tie industry can continue to make its product different in color and in design.

And by different we mean more good taste . . . not less; more attractive colors and ideas . . . not less. As a practical demonstration of one direction in which the industry might turn its eyes, we reproduce, here, one of the works of Braque . . . France's great colorist and painter. Braque sees and thinks on a higher plane. Braque dares to be different. Starting with Braque's original colorings, we demonstrate how it is possible to combine the basic elements in different and striking effects.

(REPRINTED FROM MEN'S REPORTER NEWS WEEKLY)

Fabric courtesy of Burlington Mills

LOOKING TO OTHER FIELDS FOR ORDERS

WHAT is far more important than the part played by our companion publication, the Men's Reporter News Weekly, in this achievement is the underlying thought that when a business finds its own field overcrowded and profitless, it is ofttimes wise to look over the fences for better grazing.

Several months ago the executives of one of America's largest mills, conferring with the editors of AMERICAN FABRICS, brought up the problem facing not only this company but the entire rayon industry of keeping its looms busy . . . at a fair profit . . . producing rayon shantung. The sharp decline in the sales of women's apparel had taken serious toll of all fabrics; but shantung, to which the mills had long looked for profit, was one of the hardest hit. Apparently mills faced the choice between reducing the production schedule . . . which would automatically drive the per-yard cost up . . . and openly staging a price war . . . which would just as automatically drive the per-yard profit down.

Both alternatives forebode evil times, but had anyone at the meeting any other suggestions to offer? One person did: a man whose background in the men's wear industry caused a key to click in his mind. He remembered that some years ago there was a growing vogue in the industry toward high-colored shantung in neckwear; the war had shut off that avenue, but perhaps now was the time to explore its possibilities again.

He consulted with the editor of Men's Reporter News Weekly, who agreed there might be a chance; at least it was worth putting before the retailers of America. He sped a note to the Reporter's 15,000-plus retail readers, suggesting solid color rayon shantung ties in high shades might be made into a staple running fashion; did it sound like good sense to them, and would they like to see a sample necktie? The response, within the first day, was unbelievable; within three weeks the mail from retailers, agreeing with the suggestion and asking for neckties . . . even enclosing blank orders! . . . was fantastic.

Ties were put into production, and rushed to the stores. They placed their orders with their own manufacturers . . . and then scurried around the markets seeking rayon shantung sports shirts, rayon shantung robes, rayon shantung swim trunks to round out a promotion. Right now the manufacturers of men's wear are enjoying an unexpected but warmly welcome season in rayon shantung.

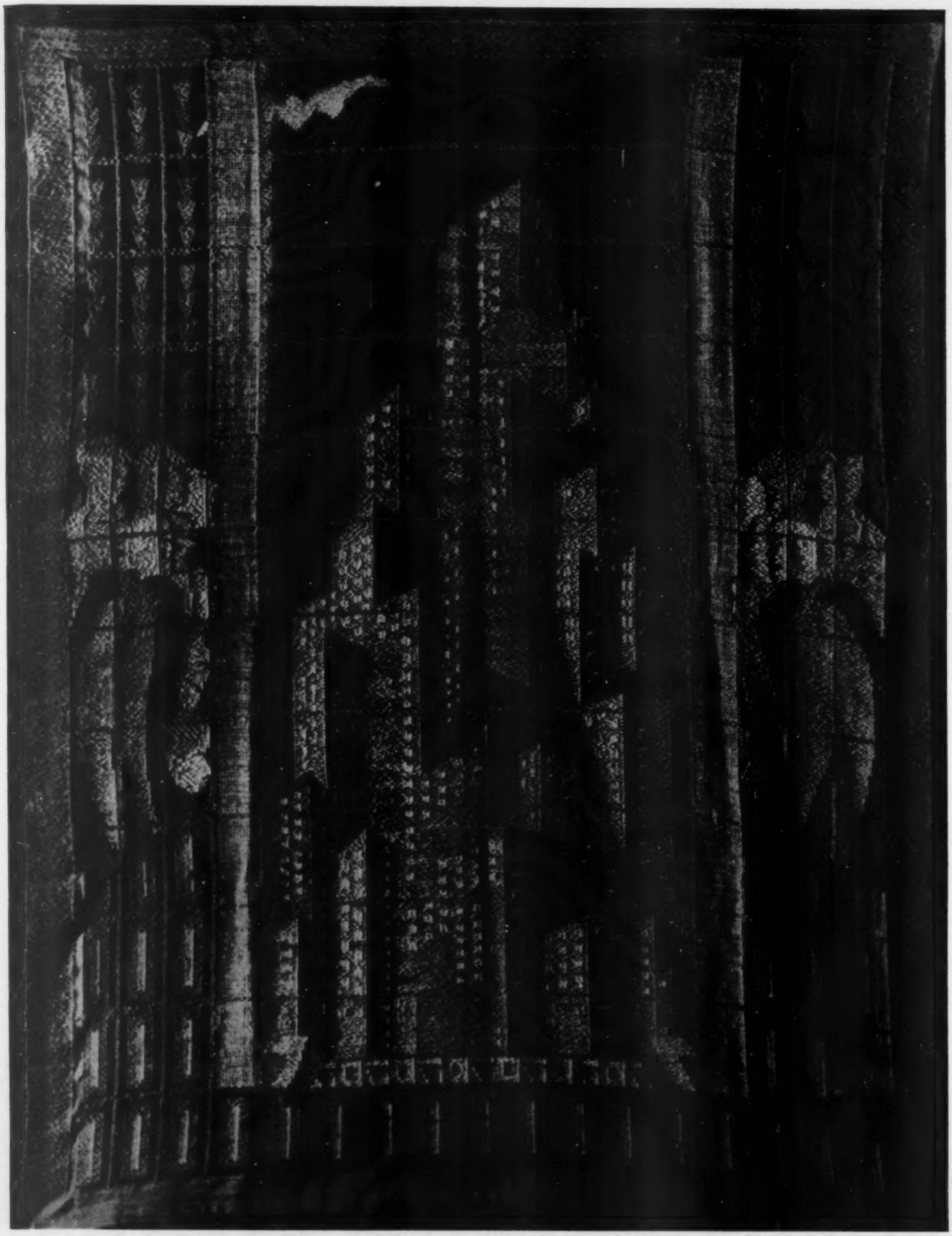
* * *

MORAL: We recount this story to point out that here was a fabric which had been created for one industry which unfortunately found itself in the position of being unable to absorb it any longer, at a price profitable to the producer. But the mill, by casting about for additional uses, discovered that the fabric was not only suitable but actually needed in another industry . . . and will dispose of large quantities for seasons to come, at a fair profit.

We recommend that other mills which may find themselves in a similar position forget their accustomed fields, if necessary, and seek other potential users. Just as during the war years mills found that desperation had brought strange industries to their doorsteps in search of fabrics, it is possible in certain instances even today to discover new uses and new customers by diligent search.

Photo by Eve Arnold

HAND-LOOM WEAVING IN AMERICA
FINAL PART



Based on a rather open web of pure Irish linen and using hand spun wools. Here is Lillian Holmes' first impression of the New York skyline on her arrival from Sweden.

FABRIC KNOWLEDGE

Additional Terms for the Hand-Loom Weaver

ABBOT'S CLOTH: Cotton, linen or mixture fabric used for draperies and hangings. Basket weaves, plain or fancy, are used in the construction; the 4-4 basket is the most popular weave used. Often known as Monk's Cloth.

ACETATE RAYON: Fiber, yarn, or material made by the acetate process. Differs from other rayons in that it is not a regenerated cellulose, but an ester of cellulose, namely, cellulose-acetate. It has diffferent physical and chemical properties from other rayons especially in its reaction with dyes. It is not affected by most dyes and a whole new set of dyes had to be developed for it.

The principal developmental work was done by Camile and Henri Dreyfus, of Basle.

ALL-WOOL OR ONE-HUNDRED-PERCENT WOOL: Where the product or the fabric to which the stamp, tag, label, or mark of identification applies is composed wholly of one kind of fiber, either the word "All" or the term "Hundred Percent" may be used with the correct fiber name; as for example, "Hundred-Percent-Wool," "All Wool," "100% Reprocessed Wool," "All Reprocessed Wool," "100% Reused Wool," "All Reused Wool." If any such product is composed wholly of one fiber with the exception of the fiber ornamentation not exceeding five percent, such term "All" or "100%" as qualifying the name of fiber may be used, provided it is immediately followed by the phrase "exclusive of ornamentation," or by a phrase of like meaning; such as, for example: "All Wool — Exclusive of Ornamentation," or "100% Wool — Exclusive of Ornamentation."

ALPACA: Long fine hair from South American alpaca sheep. The fabric was originally a cotton cloth with alpaca filling. Now alpaca is woven alone or combined with wool for coats and suits. The term "Alpaca" is at present widely and incorrectly used to describe a popular rayon fabric.

AMERICAN COTTON: Term used in world cotton markets to signify cotton raised in the United States as apart from that raised elsewhere. The word, Upland, is more or less synonymous with the term, American Cotton, since the former, from the standpoint of production, is the leading staple raised in this country.

AMERICAN-EGYPTIAN COTTON: About 140 years ago there was an exchange of cotton seed made between American and Egyptian cotton growers. Both countries benefited by the transaction. Today the strains are raised in the irrigated areas of Arizona and California, states coming to the fore in the raising of cotton.

One of the outstanding staples is Pima raised in the Pima Valley of Arizona; another is the well-known SxP (cross between Sakellaridis, Egyptian and Pima, American) used in high quality broadcloth, shirting, dressgoods, etc. Staple is 1½-inches or better.

ANGORA: 1. Goat Hair: White fleece of long, fine fibers. When manufactured, called mohair. It is so extremely smooth and soft, it must be combined with other fibers, in weaving. 2. Rabbit Hair: Angora rabbits have a fine hair that is lightweight and warm. It is often blended with wool to decrease price and to obtain novelty effects in weaving. Must be described as Angora rabbit hair.

ANILINE DYES: Any type of dye derived chemically from aniline or other coal tar derivatives.

ANIMAL FIBERS AND FILAMENTS: Obtained from an animal for purposes of weaving, knitting or felting into fabric; some animal fibers are alpaca, angora goat hair, camel hair, cashmere, cow hair, extract wool, fur, horse hair, llama, mohair, mungo, noil, shoddy, silk spun silk, tussah or wild silk, vicuna, wool, worsted, worsted top.

ANIMALIZED COTTON: Treating cotton with solutions of silk or other animal fiber matter such as albumen, casein or gelatine. The results make cotton capable of being dyed in a more uniform manner when used in mixture fabrics which contain silk, wool or other animal fibers. Also used to obtain cross-dyed effects with non-treated cotton.

ARIZONA-EGYPTIAN COTTON: Obtained from modified forms of Gossypium barbadense, it is raised in Arizona and Southern California. The staple ranges from 35 mm. to 45 mm., and includes Pima cotton raised in the area.

ART LINEN: Plain weave, cylindrical yarn, soft finish. Unbleached or bleached sheeting material may be used.

Widely used in needlework, as it is easy to "draw" the yarns.

ART TICKING: Made of cotton, linen or a mixture of both, the cotton fabric is embellished with pattern designs to enhance appearance of the finished material. Used on medium and better mattresses and pillows.

ATLANTIC STATES COTTON: A variety of American cotton which changes color more rapidly when left in the field than western cotton. The staple takes on a bluish cast and may be spotted or tinged if raised in red-clay soil caused, no doubt, by greater rainfall in the Seaboard states than in the western and southwestern cotton belts.

ATTENUATION: To diminish the diameter, as in the case of a group of fibers when they are drafted and drawn among themselves to make a smaller size roping form. In machine manipulation of fibers the stock is made into sliver form and then attenuated into slubbing, roving and yarn.

BAKU: A very fine, dull-finished lightweight straw.

BASKET: A fabric weave of any material which, instead of having single threads interlace at right angles, is made by having two threads or more weave alike in both warp and filling direction, conjoined in the regular order of the plain weave.

BEDFORD CORD: Strong rib-weave fabric with raised lengthwise lines or cords produced by warp-wise "stuffing threads." In cheaper qualities stuffer yarns are not used. May be all wool, silk, cotton or rayon, or combination fibers. Warp pique is a lighter weight Bedford cord fabric used for dress goods. It wears extremely well and is used for upholstery, suits, riding habits. First made in America in New Bedford, Mass.

BIRD'S-EYE: When this term is applied to worsted cloth it implies a clear finish, staple worsted cloth, the face of which is marked by small indentations. These are produced by the weave which suggests the eye of a bird.

BLEACHING: Necessary process to remove the natural and artificial impurities in fabrics to obtain clear whites for even dyeing and printing. This process increases the fabric's affinity for dyestuffs. Different chemicals are used for different fabrics, but after washing or cleaning, the natural yellowish color of the fiber may slowly return. Some linens are "grass bleached" . . . whitened by exposure to the sun, air and moisture. This process is slow. Bleaching is also used on white fur to remove yellowish tinge, and on furs before they are dyed.

BLEEDING: Excess dye will have the tendency to bleed, run or become fugitive in water when the material is washed or given other wet finishing treatments.

BLENDING: 1. The combining of fibers of different colors, such as heather-mixture, or of different types of fibers such as cotton and wool before spinning. 2. Term is used for the dyeing of pale furs to make them more attractive. 3. The mixing of small amounts of same fiber type from many lots, to produce a uniform result.

BOILED-OFF SILK: Silk which has had the sericin or natural gum removed by boiling in a soap solution.

BOLT, CUT, LENGTH OF CLOTH: These terms are used to designate the length of the woven cloth as it comes from the loom in the gray goods state or in the finished length in the trade. Men's wear and women's wear cloth in the woolen and worsted trade will range anywhere from a 50-yard piece to a 100-yard length. The most popular cut length seem to be 55, 60, 72, 75, 80, 90, and 100 yards. These lengths are the most desirable for the cut-fit-and-trim trade. Cotton lengths usually run from 40 to 50 yards. Rayon and silk cloths usually range from 38 to 40 yards; however, lengths other than these are used when warranted. Hand woven fabrics vary considerably in bolt length.

BOUCLE: Fabric woven or knitted with a looped or knotted surface. May be all wool, rayon, cotton, silk, linen, or a combination of fibers. Used extensively for sportswear and coatings.

BOX LOOM CLOTH: Fabric made with right-hand and left-hand twist in filling, notably box-loom crepe. Such fabrics as ginghams, plaids and checks are also made on box looms. A common name given to fabrics of this type made from any of the major textile fibers or fiber blends.

BROADCLOTH: 1. Originally a silk shirting fabric and named because it was woven in widths exceeding the usual 29 inches. 2. A tightly and plain-woven lustrous cotton cloth with a cross-wise rib. Resembles poplin but rib is finer. Always has more picks than poplin. Finest qualities are made of combed Pima or Egyptian cotton. Used for men's shirts, women's tailored dresses, etc. 3. Smooth rich-looking woolen with napped face and twill back. Better grades have a glossy and velvety feel. Used for dresses, skirts. 4. Also made of a plain weave rayon.

BRUSHED WOOL: Knit or woven fabric which has been brushed, napped or teaseled.

CAMEL HAIR: Hair obtained from camels. Rather wool-like in texture, its natural color varies from light tan to brownish black. This underhair of the camel is lustrous and extremely soft, and used, either by itself or combined with wool, for coats, suits, sweaters, some blankets and oriental rugs.

CANDLEWICK FABRIC: Unbleached muslin bed sheeting (also called Kraft muslin) used as a base fabric on which a chenille effect is formed by application of candlewick (heavy piled yarn) loops, which are then cut to give the fuzzy effect and cut yarn apeaprance of the true chenille yarn. Used for bedspreads, drapes, robes, etc.

CASEIN FIBERS: Regenerated textile fibers and produced from casein of skim milk and made to resemble wool. These fibers are blended with wool, mohair, cotton or rayon to weave or knit into a fabric, or with rabbit hair for felt hats. Manufactured in Italy under the name of Lanital.

CASHMERE: The cloth was first made from the downy hair of goats of the Vale of Cashmere. Indian commercial cashmere cloths are found in overcoatings, suitings and vestings. Cloth is made of fine wool that may be mixed with hair fibers. Soft finish is noted in the fabric. In an all-hair fiber cloth, the material is made into the famous, well-known, highly desirable Indian shawls.

CHAIN WEAVE: Effect noted on clear finish worsteds of staple variety. Chain breaks in cloth are purposely made in the construction of the cloth and they work very well in finished appearance of the material. Clearly seen when examining the cloth. John Erckens Sohns, textile manufacturer of Burtscheld, Prussia, is given credit for revealing this novelty type of design to the trade.

CHECK: A small pattern woven in or printed onto a cloth. Glen checks, gun-club checks, hound's tooth, shepherd's check are examples.

CHEVIOT: Rough woolen suiting and overcoating cloth. Similar to tweed in construction. Name is derived from the fact that hardy wool from the Cheviot Hills of Scotland is used in making the cloth.

Today the cloth is made from a plain or a twill weave. Many other cloths use Cheviot wool but are not classed as Cheviot cloth. True Cheviot is very rugged, harsh, uneven in yarn, does not hold the crease and sags with wear. It is a good "knock-about" cloth and ideal or sports wear. May be piece or stock dyed and has the tendency to shine with wear. In quality, material ranges from low to high, and it is made on hand or power looms. A genuine British fabric.

Homespun, as a tweed, is the heaviest tweed in weight per yard. It has the salient features noted in genuine tweed. In the trade today, the belief seems to be that homespun is very coarse, rather irregular and of low texture. The lighter cloths in this group are called tweeds.

The center of this cloth industry, in the olden days, was along the banks of the Tweed River which separates Scotland from England. Prior to the Industrial Revolution the material, from raw stock to finished cloth, was made in the home — shearing of the sheep, sorting, mixing, carding, spinning of yarn, dyeing and weaving. From about 1750 the factory system began to replace the home system. The result was that most of the cloth was now made on power looms that were coming into use.

Despite the great rise of power-loomed cloths, handwoven cheviots, tweeds and homehpuns are still in good demand. They bring a good price. Incidentally, there is a good psychology in advertising home-made materials and articles. The better type store features this end of the trade very much. Hence the reason as to why the old, home industry still carries on and is flourishing in some of the more remote sections of the world.

If a cheviot is not made of all wool, fiber content must be declared.

CHEVRON WEAVE: A twill weave on the order of broken twill or herringbone construction. Stricktly speaking, the weave is a small repeat effect of a pointed twill weave wherein the right-hand and the left-hand series of threads come to a point rather than in the so-called "breakline" effect noted in broken twills.

CHINA GRASS: Fibers from the ramie plant used for weaving, See Ramie.

COCKLE, COCKEL: From French "Coquelle," meaning cockle shell. Name is given to a distorted or shriveled effect on fancy clothes. This is a result of uneven scouring and fulling in finishing. Cockling may also be caused by improper tension on yarn in weaving, or lack of uniform quality in the raw material used.

COLORFAST: A term used to describe fabrics of sufficient color retention so that no noticeable change in shade takes place during the normal life of the garment. Strictly speaking, no fabirc is absolutely "colorfast." In buying fabrics make sure that they are fast to the particular color hazard they will encounter. For instance, in shirts, fastness to washing is more important than fastness to sunlight. In draperies, fastness to sunlight is most important. In infants' wear, fastness to body acid is important.

COTTON: A white, brownish-white, or bluish-white, soft, fibrous substance that surrounds the seeds of certain plants of the mallow family, called Gossypium. Cotton is the most important and versatile fiber known to mankind. It is used in inner wear, outerwear, accessories, decorative materials in the home, and in industry.

Cotton may be used to make cheap cheesecloth, tobacco cloth, or print material. It may be used to make fine drawnwork materials whose price may run into hundreds of dollars in value. Fine cotton work is produced in Europe where most of it comes from the religious schools in which the manipulation of cotton yarn, thread and cloth has been taught for centuries.

The United States now produces about thirty-five percent of the world production; India is the second largest producer of the fiber. Brazil, Egypt, Central America, China, Mexico, and Peru are other noted producing areas.

In this country there is about twelve times as much cotton used per year as scoured wool. There is about three times as much cotton cloth produced annually, on a square yard basis, as all other textile cloths combined.

Only 15% of the available cotton raising area is used for this purpose; hence, the supply can be readily taken care of by increased demands of industry.

COVERT: Medium-to-heavy fabric in a diagonal twill weave. Tightly twisted 2-ply yarns, one woolen; the others, cotton, rayon, or silk. (The very best covert is pure wool.) May have a flecked appearance because one of the yarns is white. Very durable and used for coats, suits; often waterproofed for raincoats. Cotton Coverts — made of single yarns mock twist (half white, half black or blue, etc.) which gives the same flecked effect of two-ply wool covert yarn usually warp twill weave. Cheapest plain woven heavy weight used for pants. Lighter weight for shirting. Is a staple work clothing fabric.

CRASH: Term applied to fabrics having coarse uneven yarns and rough texture. Usually made in linen but also made in cotton, rayon and wool.

CREPE: Lightweight fabric of silk, rayon, cotton, wool, or a combination of fibers. Characterized by a crinkling surface obtained either by use of 1. hard twist yarns; 2. chemical treatment; 3. weave; 4. embossing.

CROCK: (Etymology undetermined, but probably a simple colloquialism). That undesirable property of a dyed cloth by which the coloring matter rubs off the fabric and smudges or soils other materials with which it comes into contact. This fault is usually traceable to imperfect dyeing, either in regard to the method employed or the inadaptability of the dyestuff.

DENIER: It is actually a coin used as a unit of weight when speaking of the size of silk, rayon, acetate rayon and other filament yarns. One denier weighs .05 grams. In value the coin is supposed to be about one-twelfth of a French sou. Originally it was a coin, about the size of the middle fingernail, used in the time of Julius Caesar. The denier lapsed into oblivion and was finally revived by Francis I, King of France (1515-1547), the Father of the Silk Industry.

The weight of 450 meters, or 492.2 yards, is .05 grams for a 1-denier filament.

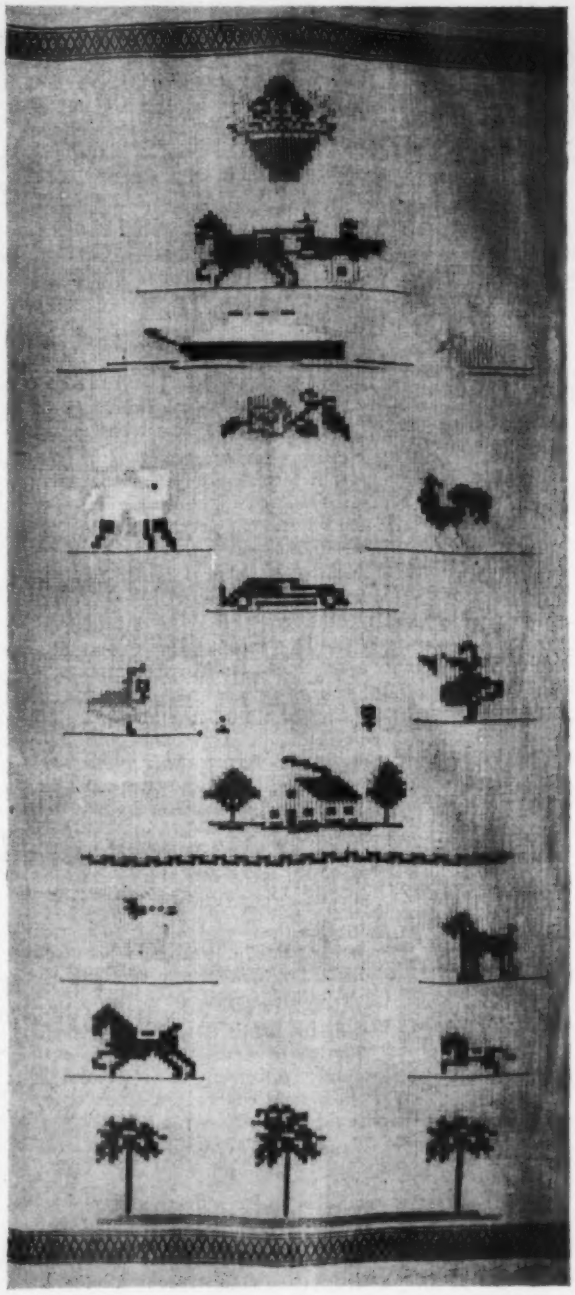
There are 4,464,528 yards in one pound of a Number One Denier silk, rayon or acetate filament. To find the yards of yarn in Denier size, divide the size of the yarn, such as a 24/26-Denier, with a medium of 25—into the 4,464,528 yards.

25)4,464,528(178,581.1 yards of yarn to the pound.

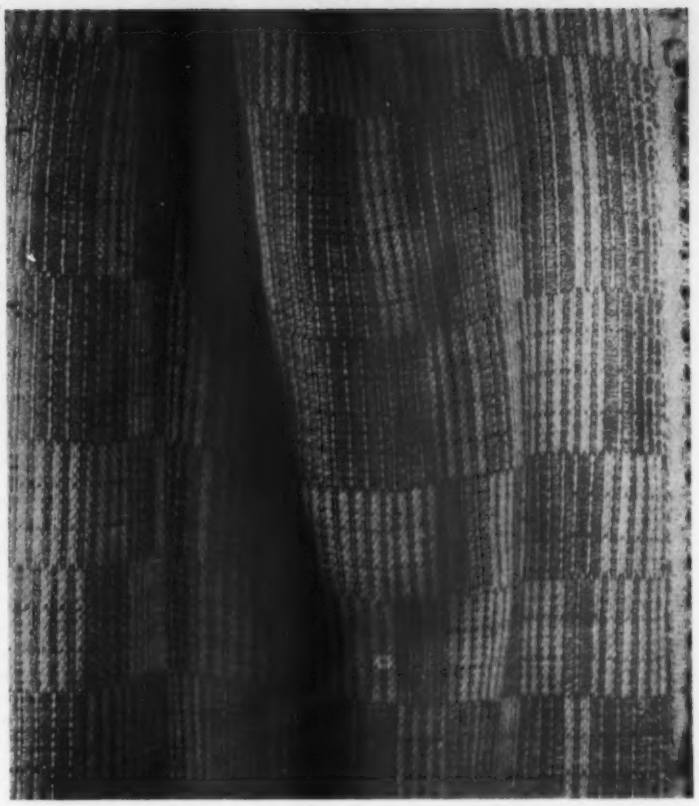
A new method of finding denier is now being used in France. The yarn numbering is based on the weight of 1,000 meters-unit per kilogram. Thus, a 60s yarn would have 60,000 meters of yarn per kilogram, which is 2.2 pounds.

DIAGONAL: Cloth that shows an oblique twill line that may run to the left or right on the face of the material. Most twill lines are 45 degrees and they go from the lower left hand corner of the cloth to the upper right hand corner. Steep twill lines may be 63, 70 or 75 degrees in angle. Diagonal cloths are easily recognized as the twill line in prominent. Some diagonals are made with a left-hand twill face effect.

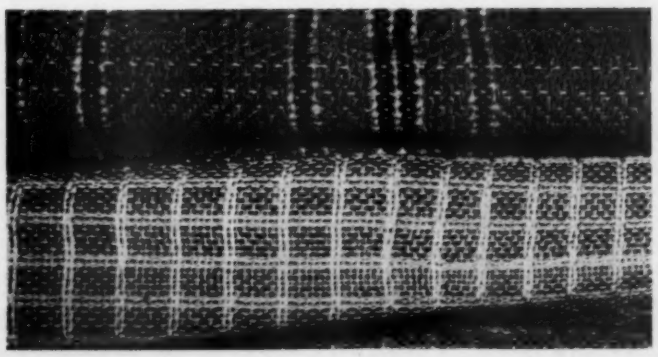
DIAPER CLOTH: Made with carded yarn. The material is woven on a dobby loom to give a diamond or bird's eye design. The filling of the goods, heavier and looser than the warp, causes the cloth to be very absorbent. The material must



An old fashioned sampler using the techniques of the 20th Century. Shown by the Courtesy of the Southern Highlanders. New York City.



Drapery fabrics designed by Nellie Sargent Johnson, Detroit, Mich.



Drapery fabric, designed by Roberta Pearson, Forest Hills, N. Y. — of 10/2 Bleach and cream linen, warp and weft. Woven by Dr. E. E. Manser, Haddonfield, N. J. for his medical clinic.

Excellent example of Dukagang Weaving.

be free from foreign matter.

30s warp and 16s filling are the yarn sizes used; textures vary from 56 to 64 by 44 to 64. No starch is applied in finishing the cloth.

Diaper, in the Middle Ages, was a rich silk cloth made in Ypres, Belgium.

DOUBLE CLOTH: Cloths woven with two sets of warp and one filling, one warp and two fillings, two fillings and two warps, or with a fifth set of binding yarns to unite the two cloths. This can be varied with different colors on each side, or with patterns that are reversed. See Frenchback.

DOUBLING: Feeding two or more slivers, slubbings, rovings or yarns into some textile machine. Doubling offsets drafting, as it is necessary to double-up on the feeding-in end of a machine to offset and balance this draft which draws out the fibers. Without doubling, it would be impossible to make yarn.

DRAFTING: The drawing of fibers, that may be in some sort of rope form, among themselves, to make the stock take on more the appearance of yarn. Excess speed of the front rollers of the machine in question, over the carrier rollers and the back rollers, makes drafting of textile fibers possible.

Twist is added in drafting to sustain the fibers in their form of sliver, slubbing, roving. These forms must not be drafted to the point where the fibers will collapse and not be able to sustain themselves. Doubling-up on the stock fed into machines takes care of this end of the work.

DRAPE: The manner in which a fabric falls when hung or placed on a form, frame or mannikin. Stiffness or draping quality is now measured by the Drapeometer. Draping will readily show if a material is to be used in a form- concealing or a form-revealing garment.

DRAWING: To hold at one end or point and pull or draw from the other end to increase the length of the mass or bulk of fibers, sliver, slubbing, roving. Drawing is closely allied with drafting and the terms may be interchangeable.

DYEING: The manner of coloring textile and other materials so that the color will appear an an inherent property of the dyed artcle; it does not have a superficial effect on textiles such as noted in stencilling or hand painting.

Dyes will vary in their resistance to alkali, acid, gas, dust, perspiration, sunlight, washing, etc.

ELASTICITY: The property of a filament or yarn to elongate upon application of tension, and to recover part or all of the original length upon the release of tension.

EMBROIDER: To ornament textile materials by needlework which embellishes the design and appearance of the article.

EMBROIDERY COTTON: A cotton thread of varying ply, rather slack twisted and used for decorative needlework. Some of the cotton is known by the initials or name of the manufacturer, as D.M.C. or Clark's O.N.T., etc.

EPONGE: A soft, loosely woven fabric made of a large ply yarn with uneven twist, silk, wool, or rayon. Used for dresses, suits. Name desrived from the French word for sponge.

FIBER: An individual strand sometimes referred to as a filament. It is a slender, fine diameter, single strand. Several fibers, however, may be combined to them ready for spinning, weaving and knitting purposes. A fiber usually has a rather definite set length.

FILAMENT: An individual strand that is indefinite in length. Examples are silk, which may run from 300 to 1400, 1600 and even 1800 yards in length; synthetic filaments are indefinite in length and may attain a total length of several miles. Filaments are finer in diameter than fibers. A fiber or a filament is the smallest unit in any type of cloth.

FINISHING: The art and science of making materials presentable to the consuming, buying public. Cloth is converted from the gray goods state, as it comes from the loom, into a fair, medium, good, or excellent cloth ready for usage. Textile fabrics are "made in the finishing" as there has never been a perfect yard of cloth, free from defects of some sort, woven. Finishing takes care of these defects in the material.

FLANNEL: 1. An all-wool fabric woven of woolen yarns, with a softly napped surface. 2. Cotton flannels are noted for their softness, are made in different weights for baby clothes, dresses, shirts, linings. 3. Cotton flannelette is usually one of the lighter cotton flannels printed, napped on one side. Largely used for sleeping garments.

FLAX: Fibers obtained rom the stalk of the flax plant. Flax is the raw material and when spun into yarn and woven into fabric is known as linen. Line fibers are those ten inches and over in length; tow fibers are those less than ten inches in length.

FRENCHBACK: A cloth with a corded twill backing of different weave than the face of the cloth, which is clear finish in appearance. It is a staple worsted cloth. Back weave is of inferior yarn when compared with the face stock. The backing gives added weight, warmth, more texture and stability to the cloth.

GAUGE: The term is used to define a unit of measurement. 1. The number of needles in 1½ inches of the needle bed or cylinder of certain types of knitting machines. It is derived from the original meaning in the preparation of leaded needles in a 1½ inch space. For example, a 45 gauge means that the machine has 30 needles in the 1½ inch space, in full fashioned hosiery. 2. With regard to needles, gauge refers to the thickness of the needle in the shank and hook. The shank is not always the same gauge as the hook; a 38 gauge shank may have a 42 gauge hook. 3. In a fabric, gauge refers to the construction. 4. In spinning machinery, the term is used when speaking of the spacing of spindles in order to figure floor spacing, layouts, etc. 5. Gauge is used, in rare instances, to designate the courses per inch in hosiery fabric. This application, however, is meaningless as far as the actual gauge of the machine, upon which the fabrics were made, is concerned.

The trend, at present, is to refer to the "cut." This is the actual number of needles per inch in a machine. In flat rib knitting, gauge and cut are both used to imply the number of needles per inch in each needle bed; rib work requires at least two needle beds, either flat or circular.

GINGHAM: Cotton plain weave material made with medium or fine yarn; comes in stripes, checks and plaids; is yarn dyed or printed. The weight is about six yards to the pound. Texture average about 64x66.

GLEN URQUHART: See Overplaid.

GRAIN: A term used to imply the threads in the material which run parallel with the selvage. All pattern pieces laid on the material should have the grain line of the pattern running parallel with the warp or grain in the goods.

True grain is when the key threads are at right angles to each other — the warp thread or threads at right angles to the filling thread or threads.

Bias grain is where the key thread or direction, dependent on the way the material is held or laid out, runs in the diagonal direction.

GRAY GOODS: Also spelled grey, greige, griege. They are cloths, irrespective of color, that have been woven in a loom, but have received no dry or wet finishing operations. Gray goods are taken to the perch for the chalk-marking of all defects, no matter how small. These blemishes must be remedied in finishing of the cloth. Material is converted from the gray goods condition to the finished state.

Dry finishing operations may include: perching, measuring, burling, specking, mending, sewing, experienced sewing; shearing, napping, gigging, pressing, packing, wrapping and so on.

Wet finishing operations may include: dyeing, printing, washing, fulling, milling, scouring, soaping, shrinking, crabbing, tentering, sponging, decating, London shrinking, waterproofing, mercerizing, gassing or singeing; beetling, chasing, schreinerizing, embossing, bleaching, sizing, calendering, friction calendering, sanforized, etc.

GUN CLUB CHECKS: Men's and women's wear dressgoods used for street and sportswear. Three colors of yarn are used in making the cloth. The warp and filling make a natty combination in the cloth. Men's wear cloth often has a smaller check than women's wear cloth. Men's wear cloth could be laid out in warp and filling, as 6 blue, 6 brown, 6 green in warp and filling arrangement. Women's wear cloth could be constructed as follows: 12 light brown, 12 dark brown, 12 green, in warp and filling.

HABIT: Outergarment costume, dress or garb often indicative of a particular rank, calling or pursuit. Examples are clerical garb, nun's veiling, riding habit cloth, spectator clothes, etc.

HAND SPUN: Yarn which has actually been spun by hand. Also, fabrics made from hand spun yarn. Yarns and fabrics of this type are always interesting, intricate and more unusual when compared with most machine-made fabrics on the market today.

HAND WOVEN, HAND LOOMED: Those materials, wide in scope and design, made on either a hand loom or a hand-foot power loom. Hand woven fabrics express the individuality and technique of the weaver.

HERRINGBONE: Used for suitings, topcoatings, overcoatings, sport coats, dressgoods in men's and women'e wear. The cloth gives a weave effect in fabric that resembles the vertebral structure of the fish known as herring. The clothes are staples and always in demand. All herringbones are broken twill weaves but all broken twill weaves are not herringbones. The latter should balance perfectly to be called a herringbone and not a broken twill. Many types of stock, color and weaves are used in making the cloth.

HOPSACKING: An open, ply yarn, basket weave fabric of either cotton, linen, or rayon. Used for dresses, jackets, etc.

JOBBER: One who buys textiles in bulk from mills and then re-sells them to smaller dealers; really a "middle-man." He is paid for his services, gives term-payments, and makes his money from a "higher-price and less quantity" idea.

JUTE: A coarse, brown bast stalk fiber obtained from plant of this name raised chiefly in India. Uses include burlap, cordage and as backing in carpet and rug manufacture.

LABEL: A ticket or tag attached to any article. When attached to a garment it gives such information as size, price, color, style number, details for the consumer to follow, etc.

LAME: Any textile fabric in which metallic threads are used in the warp or the filling for decorative purposes. Lamé fabrics are used chiefly in evening wear. The word means "to flatten."

LENGTHWISE: This denotes the area covered by the warpwise thread; the opposite of crosswise.

LINEN: Strong lustrous yarn or fabric of smooth-surfaced flax fibers. Can be either a plain weave or a damask weave for table linens. Used for wearing apparel, household articles, fancy work.

LINEN-TEXTURED RAYON: A large and important category of rayon fabrics having the distinctive textures of linens. These range from sheer handkerchief-linen texture to heavier, rougher "butcher-linen" texture. Usually plain weave. Used in lighter weight for handkerchiefs, women's and children's dresses, tablecloths, towels, sheets, pillowcases; heavier weights for summer coats, suits, sportswear.

LINTERS: The exceedingly short fibers obtained from the cotton seed in the delinting or second-time ginning, usually done in the large city in the South. These fibers are those which have clung tenaciously to the seed during first time ginning on the plantation or at the community gin. Incidentally, cotton linters form the basic raw material for rayon, acetate rayon and estron.

LONG STAPLE COTTON: That cotton whose length is 1⅛-inches or over in actual staple length.

LUSTERING: Applying luster, gloss, shine, ciré effect, etc., to fabrics in finishing. May be done by calendering, friction calendering, other roller and heat treatments.

MATERIAL: 1. The units, parts, portions or substances of which an article is made or can be made. 2. Synonymous with goods, fabric, cloth, stuff, etc.

MERCERIZING: Cottons will take on a permanent, silken-like luster when treated in a cold, caustic soda bath at room temperatures. The yarn or fabric will also become stronger, more absorbent, and more susceptible to dyestuffs. Discovered by accident in 1849 by John Mercer, the well-known and revered calico printer of England.

MERINO: (The Spanish word "merino" signified roving from pasture to pasture, said of sheep; probably from the Latin "major," greater.) The very fine quality of wool of the so-called Merino sheep of Spanish origin. Hence a cloth of such material. The term "Merino" is now applied also to woolen fabrics, notably undergarments constructed of yarns with an admixture of cotton to prevent shrinkage in laundering.

MERINO WOOL: The highest, finest and best type of wool obtainable. The best wool in the world comes from Botany Bay and Port Philip areas of Australia. This merino stock is used for worsted cloths of the better grade. Merino wool is listed as a Class One Wool, and 85% of all Australian wool is merino. Other world centers for the fleeces are Ohio, Austria, Saxony in Germany, France, Argentina, Spain and the union of South Africa.

Merino wools have the best working properties and have been spun, for commercial purposes, to 80s worsted counts.

MERINO YARN: This term has two meanings. in the woven trade it is the best yarn made. In the knitted trade the term implies the best grade used for woolen and worsted knitting. There is, however, the understanding that it may contain shoddy, mungo, cotton, re-used wool, re-manufactured wool, etc.

The yarn is comparable with a good three-eighths blood stock. Knitted fabrics, as a general rule, do not require stock any better than this quality when their uses are considered.

METALLIC FABRIC: Decorative or apparel fabric made of silk, rayon or cotton warp and metallic filling threads — gold, silver, copper, tinsel, aluminum, etc. Also used in trimming and in the millinery trades, the thread is commonly called Lamé. Threads of this type are used considerably in hand woven fabrics.

MODIFIED STAPLE FIBER: Rayon staple or spun yarns treated so as to give wool-like properties to the product. The surface effect of fabrics made of this staple stock is usually somewhat rough. Teca is a prominent fiber in this group.

MOHAIR: 1. (From the Arabic "Mukhayyar," a goat's hair fabric.) Called in Medieval times "mockaire." A glossy lining cloth in both plain weave and twills, in dyed or natural colors, made from the hair of the Angora goat of Asia Minor. It is made of domestic fibers, also of other stock.

2. Cloth made from the hair of the angora goat. Used for lining, is lustrous, made in plain and twill weaves, dyed in natural shade or in other colors. Mohair cloth is made with the straight fiber, or of mixed stock. Wide range of cloth in this type of material.

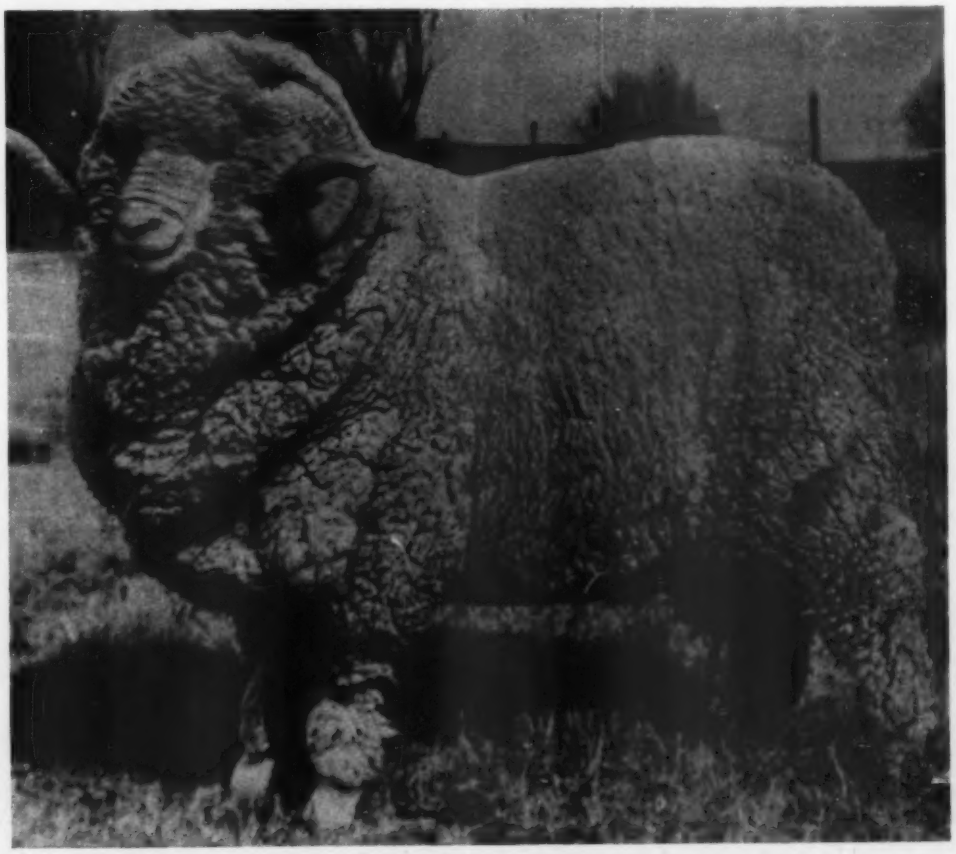
MONK'S CLOTH: Made of coarse cotton or linen yarn. A 4-and-4 basket or similar basket construction is used. Hangings, couch covers and furniture material are uses of the cloth. Not easy to sew or manipulate; yarns have a tendency to slide. Cloth may sag. It is a rough, substantial fabric.

MONOFOIL: When the viscose solution is forced through only one minute hole in a spinneret, a single-filament yarn of unlimited length and resembling horsehair may be produced. The yarn is called monofil. It is of value in the millinery industry as a substitute for horsehair, the use of which has always been limited by its short length.

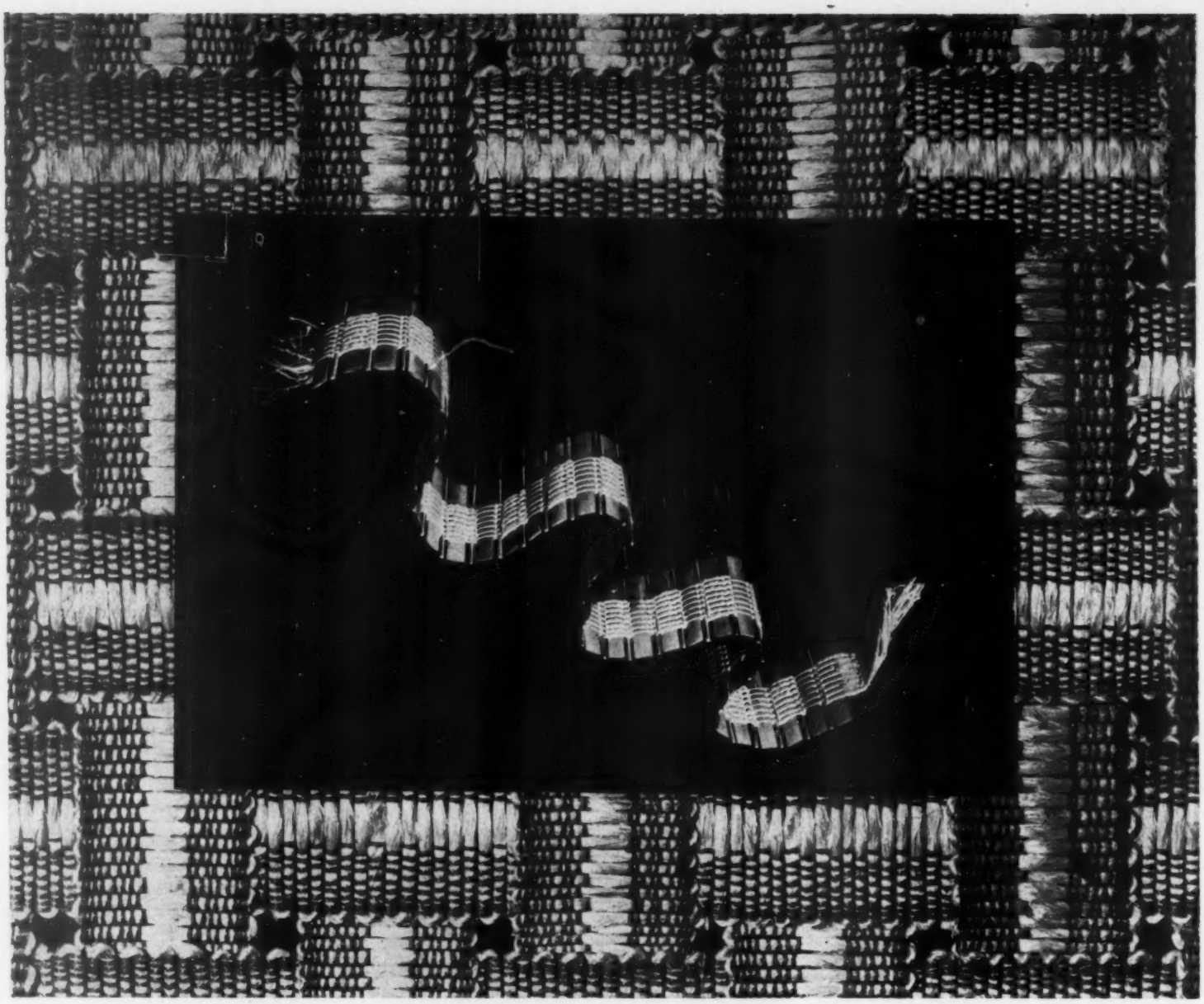
MORDANT: A chemical agent used on some textile fibers to increase affinity for dyes. The mordant will combine with a dyestuff to form an insoluble compound or lake which serves to produce the fixed color on the material.

NAP: The fuzzy or protruding fibers noted on the surface of a finished material. Nap covers up to a great degree the interlacings between the warp and filling threads. It gives added warmth to the wearer.

NET, NETTING: 1. A lightweight cotton material used for mosquito netting and screening. Leno weaves are used to make the material which is re-inforced at intervals by the closely beaten-up filling which forms a type of tape effect. 2. An openwork material usually made on a lace machine. Forms the foundation for a great variety of laces. Used for curtaining, millinery, hangings, runners, pillows, etc. 3. A network of cord. 4. Material made of thread or twine, knotted into meshes or designs. It is commonly used for dresses and evening wear.



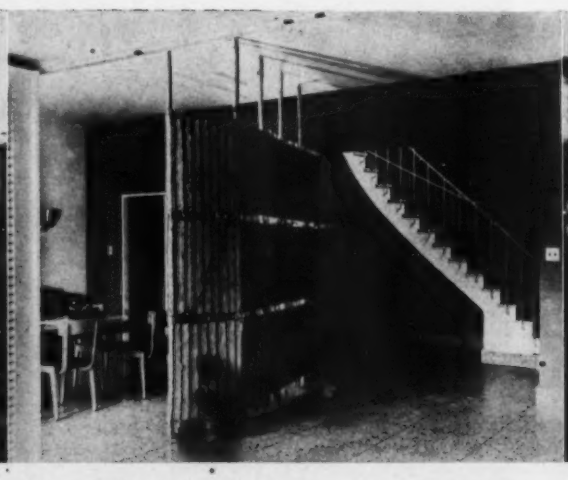
This is the famous Merino — from which comes the world's finest wools.



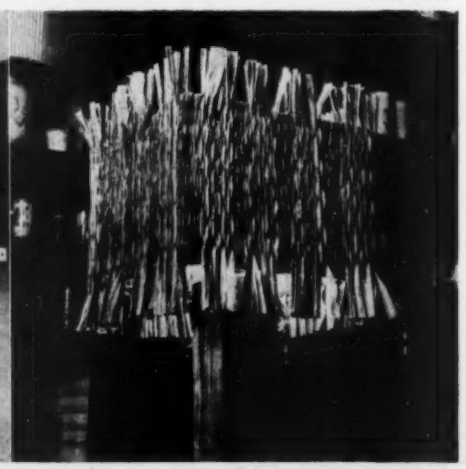
Hand-woven Maguey chair webbing; cotton warp and Maguey weft. Inset shows belt of bamboo pieces and Zarna, a thin reed like weed. Photos by S. A. M.

HANDLOOM WEAVING IN PUERTO RICO

Loom in the weaving shop of Puerto Rico development company. Weaver is Jose Tono.



Screen designed by G. Funk, woven of Cogollo and Junco and gold cord on bamboo poles; home of Dr. I. Montilla.



Lamp shade woven of Ollejo and royal palm leaf.

NEW MAN-MADE FIBERS: They include high-strength Viscose, rayon staple, strong Fibro, strong Acetate, and Acetate staple, etc.

They are made along the same or similar methods used in making rayon and acetate rayon.

They are used in varying percentages with major textile fibers for apparel, commercial and industrial fabrics and household articles. The yarns may also be used alone in making fabrics.

NYLON: A generic term for any long-chain synthetic polymeric amide which has recurring amide groups as an integral part of the main polymer chain, and which is capable of being formed into a filament in which the structural elements are oriented in the direction of the axis.

As a textile yarn nylon's outstanding properties are strength, toughness, washability, quick-drying, elasticity, resistance to mildew and insects. Nylon is used (alone or blended with other fibers) for hosiery, underwear, foundation garments, lingerie, dress fabrics, gloves, sewing thread, ropes, braids, tapes, webbing, industrial fabrics, etc.

OVERPLAID: In reality a double plaid. This is a cloth in which the weave or, more often, the color effect is arranged in blocks of the same or different sizes, one over the other. Again, the cloth may show a plaid design on a checked ground construction. This effect is noted in English mufti and in golf togs, neat business woolens and worsteds in morning, lounge and semiformal wear. This cloth goes under the name, sometimes of GLEN URQUHART, the name of the Scottish clan that is given credit for bringing this type cloth to the fore. Urquharts are usually light or medium in weight, running from nine to thirteen ounces. Two, three or more colors are used in designing the patterns. Overplaids are ideal for travel as they do not show the dirt as readily as other cloths, generally speaking. Uses of the cloth as overcoating and topcoating is considerable. Overplaids are cycle cloths that come in vogue about every seven or eleven years, and when in demand, they seem to over-shadow other fabrics. There are many grades and qualities found on the market as staples.

Incidentally, the true Glen Urquhart Plaid of the Scottish District Checks will show a left-hand twill line on the face of the goods; particularly will this effect be noted at the "four-by-four areas" where the same and the contrasting colored yarns interlace to form the larger blocks or checks in the pattern.

It is the only plaid made in this manner; all others should be made with the easily observed right-hand twill diagonal lines. Most Urquhart plaid, however, is made today with the conventional "right-hand twill-effect" running from the lower left to the upper right on the face of the cloth in the color-effect construction used.

OXFORD CLOTH: Plain, basket or twill weaves are used in this cotton or rayon cloth. There are two yarns which travel as one in the warp, and one filling yarn equal in size to the two warp yarns.

OXFORD MIXTURE: Usually a color effect in dark grey noted in woolens and worsteds. The degree of shade is goverened by the mixture percentages of black and white stock used. Mixing takes place prior to the carding and spinning of the yarn.

PENCIL STRIPES: Suiting material that has fine, light white or tinted stripes running in the warp direction.

PEPPER AND SALT: Apparel material of fine, speckled effect. Th appearance of the cloth suggets a mixture of salt and pepper. Cloth is made in shades of gray, brown, green and blue. The effect is obtained by the use of two-colored twisted yarns, ordinarily in black and white or by the intricacy of the weave with two or more solid color yarns.

PIECE DYED CLOTH: Any material that has been dyed some solid color or shade. One of the group of three greatest methods of dyeing — piece, stock and yarn or skin dyeing.

PILE FABRIC: A material that, to some degree, resembles fur. The cloth may be cut or uncut. It has a nap on the face of the goods, or it can be made so that there will be long loops in the uncut type of material. Pile cloth may be soft or harsh in feel, have considerable body, and an appealing appearance.

Some common pile cloths include Terry toweling, furniture covering, velvet, velveteen, panne velvet, corduroy, runners, rugs and carpets, mohair plush, car seat plush, straight plush and that used in automobile upholstery, imitation fur fabric, powder puff cloth, etc.

PIN-CHECK: Worsted suiting that has a small, figured effect about the size of a pin-head. Color effects are used in making the design and the finished fabric shows a cloth studded with the minute pin-checks.

Also a fine rayon fabric made with different colored yarns. The pinchecks are very small. Gives good service.

PLAID-BACK: A light, medium or heavy overcoating made on the double cloth principle — two systems of warp and filling, with a binder warp or filling arrangement. The underside of the cloth is a plaid.

POPLIN: From the French, "popeline." It is a staple, dressgoods material. The cloth resembles bombazine, and silk warp and woolen filling are used. In the higher priced cloth, worsted filling is utilized. Filling yarn is particularly cylindrical as it tends to give the rounded form of rib line, noted in the fabric in the horizontal direction. The cloth is also made from other major textile fibers.

Cotton poplin has a more pronounced rib filling effect than broadcloth. The filling is bulkier than the warp but there are more ends than picks per inch in the material. In the carded poplin the textures vary from 88 x 40 to 112 x 46; combed poplin ranges from 88 x 44 to 116 x 56. The cloth is mercerized and usually chased for high luster. May be bleached or dyed with vat colors; printed poplin is also popular. Heavy poplin is given water-repellent finish for outdoor use; some of the fabric is given suede finish.

This formidable fabric is used for blouses, boys' suits, gowns, draperies, robes and shirting; much uniform fabric is made from the cloth, as well. Rayon poplin is much used in women's wear, and pajama fabric.

PROLON: Term applied to textile fibers made from protein bases. Examples are casein (milk) and zein (corn). Vicara, made by the Virginia-Carolina Chemical Co., Inc., is another example of a protein fiber (prolon). Manufactured in Taftville, Conn.

PULLED WOOL: That wool obtained from the pelts of dead animals by chemical means. Much of this wool comes from mutton sheep that have been slaughtered for food. In this country, about 50-million pounds of grease pulled wool is produced annually. Inferior to clipped wool.

QUARTER GOODS: A width of nine inches. Three-quarter goods would be 27 inches wide; six-quarter gods, 54 inches wide and labelled 6/4.

RAMIE: A bast fiber somewhat on the order of flax, raised chiefly in China, Japan and India. Also known as Rhea or China Grass.

RAW FIBERS: Textile fibers in their natural state such as silk "in the gum" and cotton as it comes from the bale.

RAYON: The American Society for Testing Materials defines rayon as: "a generic term for filaments made from various solutions of modified cellulose by a pressing or drawing the cellulose solution through an orifice and solidifying it in the form of a filament." The term also implies fabrics made of rayon fibers or filaments.

The cellulose base of the manufacture of rayon is obtained from wood pulp or cotton linters which are the short brown fibers left on the cotton seed after the first-time ginning on the plantation or at the community gin. Wood pulp for rayon comes from spruce, pine or hemlock chips.

Rayon includes yarn made from the cuprammonium, nitro-cellulose, viscose and acetate methods. The making of rayon involves much scientific and chemical knowledge, research, and experimentation.

Rayon fibers, like cotton, leave an ash when burned with the exception of acetate rayon which leaves a hard bead difficult to crush between the fingers. The method of making acetate rayon differs from the other three methods.

About sixty-six percent of all man-made fibers are produced by the viscose method; about thirty-two percent on the acetate method, with the cuprammonium method supplying the remainder since the nitro-cellulose method is all but extinct.

REDOUBLING: In reality a form of doubling which implies the constant doubling in a series or set of textile machines. Doubling and redoubling are essential in making even, uniform yarn; without the use of either yarn just could not be made.

REGENERATED CELLULOSE: A term describing a chemical treatment of cellulose during its manufacture into rayon. Rayon types which have similar reactions, chemical and physical, such as viscose and cuprammonium: This is distinguished from cellulose acetate which reacts differently to dyes and chemicals.

REMNANT: A short length of cloth. They accumulate around the mill and in the piece goods department of stores. Sold at reduced prices because of short length.

REP: The term is a contraction of "rib." This plain weave cloth is similar to poplin but has a more marked ribbed effect in the filling direction. Very often a large or distinct rib is alternated with small rib; cylindrical filling is used to enhance the effect. Rep is high in texture, 96 to 136 by 42 to 68.

Light weight rep is used for blouses, shirts, shorts; heavy rep is much used for curtaining and drapery material. The material may be dyed, printed or white.

RESILIENCY: A natural property of wool and silk which causes them to spring back when crushed in the hand. This helps prevent wrinkling of the cloth. Linen, cotton, rayon are not inherently resilient, but can be treated chemically to help them resist creasing and crushing.

ROVING: The continuous, soft, slightly-twisted strand or ropelike form of fibers, as of cotton, rayon staple, worsted, etc. Made from sliver or slubbing and produced on the roving frame, the term implies any stock one step removed from being finished spun yarn.

"Cloth Analysis In Hand-Loom Weaving"

Cloth analysis is the interpretation of any woven fabric into the threading draft and treadling.

The following simple procedure will act as a simple guide to enable weavers to take a piece of fabric and analyze it for reproduction. To begin, it is suggested that you choose for the first few swatches to be analyzed, fabrics which can be easily ravelled. A pick-out glass or magnifying glass is very helpful in reading the material. The swatch chosen should, of course, contain at least one complete repeat of the pattern. Select a piece of material about three or four inches square, depending on the size of the pattern, and then follow the basic outline given on this page below:

I. First step in preparing the swatch for analysis is to determine which is warp and which is weft. Next, check for the face and back surfaces of the fabric. Then with the face of the swatch toward you, and the warp running vertical, clip the upper right hand corner as in Fig. I. (Insure that the piece is held in the same position if it becomes necessary to put it down during the analysis.)

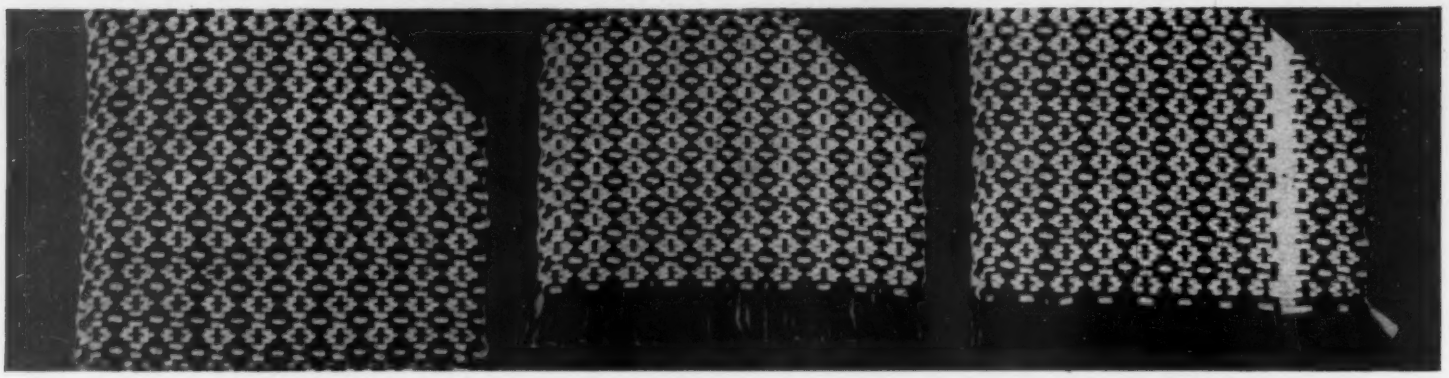


FIGURE I

FIGURE II

FIGURE III

Make a definite warp and weft margin on the swatch to assure correct reading of the warp threads.

1. Pull out all weft threads from the bottom of the swatch until there is about ½ inch fringe of warp threads along the lower edge of the swatch. (see Fig. II)
2. Pull out ¼ inch or so of the warp threads starting about one inch in from the right edge of the swatch. (See Fig. III.) This is very important and if omitted is likely to result in an incorrect graph.

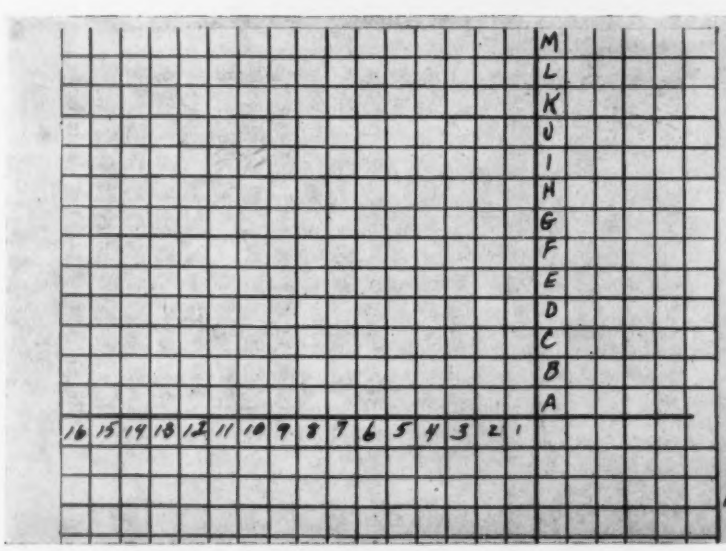


FIGURE IV

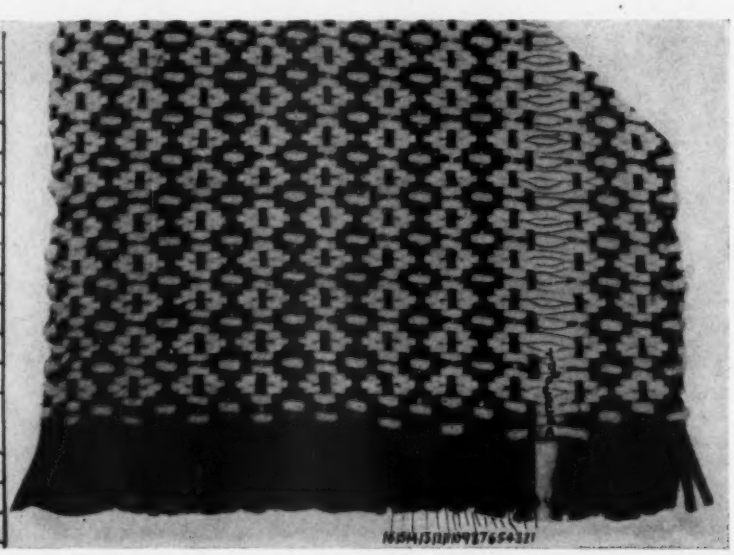


FIGURE V

II. Prepare the graph paper for the analysis.

A. Draw a vertical line following the printed line of the graph about two inches in from the right edge of the paper. (See Fig. IV)

B. Draw a horizontal line following the printed line about two inches from the bottom of the paper. (See Fig. IV)

C. Letter each row of horizontal squares as in Fig. IV (e.g. A, B, C)

D. Number each row of parallel squares as in Fig. IV. (e.g. 1, 2, 3, 4, etc.)

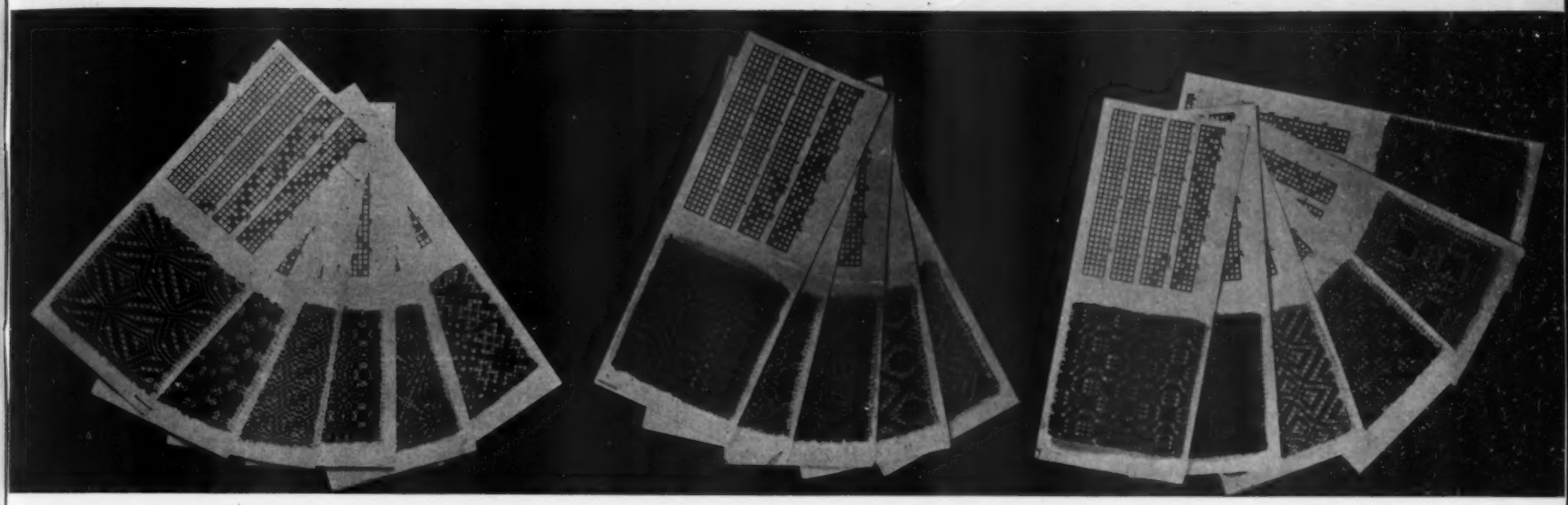
E. Compare the lettering and numbering of the horizontal and vertical spaces in the graph picture (Fig. IV) with the lettering of the weft threads and the numbering of the warp threads in the picture of the swatch (Fig. V)

1. The lettering of the rows of horizontal squares in Fig. IV represent the weft threads of the swatch in Fig. V, and the progress of "A" row of the swatch will be transposed to "A" row on the graph paper.
2. The numbers in the rows of squares in Fig. IV represent the warp threads of the swatch in Fig. V.

III. Transpose the thread structure of the swatch to the graph paper: (that is, transpose the pattern of the threads in swatch Fig. V to the graph):

A. Determine the course of the first weft thread, and chart it on the graph.

[In (Fig. V) "A" weft passes *under* warp "1" and then *over* warps "2," "3" and "4," under "5" and "6," over "7," under "8" and "9," over "10," "11" and "12," under "13" and "14" and so on across the row. When the weft thread passes *under* a warp thread the space on the graph representing that warp thread should be left *blank* and when the weft thread passes OVER a warp thread the space on the graph representing that warp thread should be FILLED IN.] In (Fig. VI) the graph is shown with weft line "A" filled in where the weft thread has passed over a warp thread and a space has been left where the weft passed under a warp thread. (*Continued at bottom of next page*)



Seventeen overshot patterns from the sample collection of the late Bertha Hayes of Providence, R. I.

A group of girl scouts from Nashville, Tenn. working on their looms in camp. Shown by courtesy of the National Girl Scout News Bureau

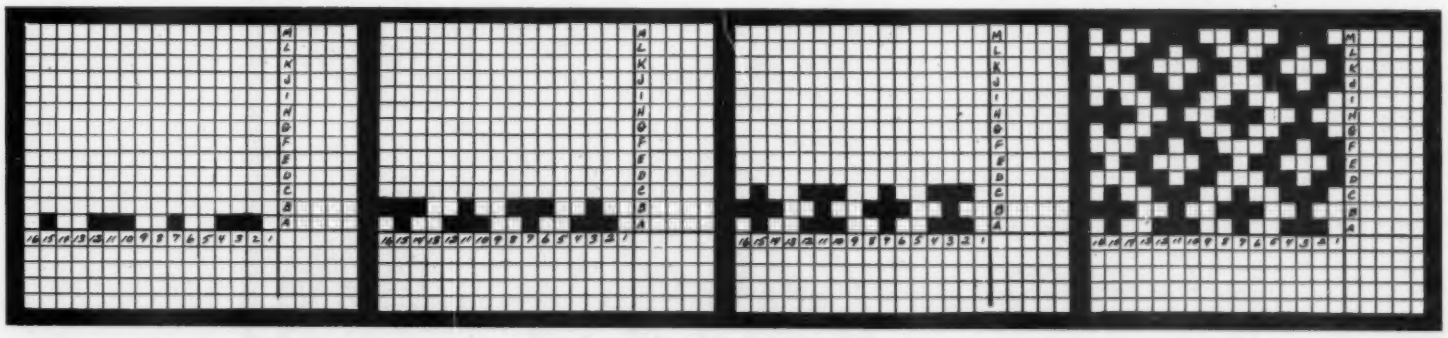


FIGURE VI FIGURE VII FIGURE VIII FIGURE IX

B. Check carefully the graph line "A" (Fig. VI) with the cloth weft "A" (Fig. V) and be sure that each warp thread has been noted in its proper place. Pull out "A" thread from the swatch so that row "B" can be clearly studied.

C. Follow carefully the passage of "B" thread in the swatch and fill in the squares on line "B" of the graph paper. (In (Fig. V) "B" weft passes under warps "1" and "2," over "3," under "4" and "5," over "6," "7" and "8," etc. (Fig. VII shows line "B" of the graph.)

D. Check carefully the graph line "B" (Fig. VII) with the cloth weft "B" (Fig. V.) Pull "B" thread from the swatch so that you may go on to "C" thread.

E. Weft thread "C" is next to be read and noted on the graph paper. (Fig. VIII shows line "C" of the graph.)

F. Carefully read and note on the graph paper ten or twelve weft threads. As many weft threads as will complete a pattern should be drawn on the graph. (Fig. IX shows the graph worked out from weft "A" through weft "M.")

SATIN: 1. One of the three basic weave constructions, the other two are plain weave and twill weave. All weaves, simple or complex, are based on these three basic weaves. 2. Silk or rayon fabric sometimes with a cotton filling, which has a smooth surface, a lustrous face and dull back. The luster is obtained by the weave and the finish produced by running it between hot cylinders. Made in many varieties and in many qualities for linings, dress goods, trimmings, lingerie, etc. If made of fibers other than silk, fiber content must be declared.

SCISSORS: A cutting implement consisting of a pair of blades with handles. These blades are pivoted face to face so that the sharpened edges may be brought closely together in order to cut fabric.

Buttonhole scissors are from three to five inches long and have blades which are regulated by a screw. Their edges stop short of the pivot so that a slit can be made without cutting the edges of the material.

SEA ISLAND COTTON: The finest cotton in the world grown upon the archipelagoes along the Southern states in the United States. It is generally fine in staple and has a high degree of spirality or "hook." Some staple is two-and-one-half inches long. Compared with other cottons, the yield is very small .

SECONDS: Goods which cannot be sold as "perfect" or "first quality cloth."

Seconds have blemishes or flaws and may be bought-cheaper than first-run fabric. Much of this cloth is picked up by the buying public in the basement bargain counters of the department store and in mill-ends. Seconds are labelled so that the customer will know that the goods are not perfect and that some imperfection is present. Many seconds are almost as good as firsts.

SERGE: Popular staple, diagonal worsted cloth, dyed in piece and may be made in mixture or fancy effect. It is possible to stock-dye and yarn-dye the material, but piece-dyeing is preferred. The name is derived from the Latin "serica." This would imply that the cloth was originally made of silk. The weight of serge runs from ten ounces upwards and it is one of the most staple of cloths. Made of wool, worsted, cotton-worsted and in other combinations. Clear finish is given the material although unfinished and semi-finished serge is on the market. Mohair serge is used as a garment lining. A two-up and two-down right hand twill is used in constructing the cloth, 45-degree angle. The quality and price range is from the lowest to the highest because of the call for all types of serges. It is a formal, dressy type of cloth and is conventional at all times. Serge holds the crease very well but will shine with wear. This shine canot be removed permanently. It is a good cloth in tailoring as it drapes and clings very well.

Rayon or silk serge is of high texture, smooth finish and is a rugged type of fabric. Used for coats, children's wear, dresses, men's suits, sportswear.

SHADOW WEAVE: An effect on cloths in stripes or plaids produced by the immediate duplicating of the weave formation after a definite repeat in darker tones or shades of yarn which gives the appearance of reflected shadows being cast upon the lighter parts of the fabric. Upon staple goods, as black or blue, it is produced by the yarns used in part of the pattern being twisted in spinning in an opposite or reverse direction to those elsewhere required, which, in the woven cloth, will give a "shadow" effect. In worsted suitings such as herringbones, bisected block and diamond patterns, etc. it is particularly effective.

SHARKSKIN: A fine worsted quality fabric made from small color-effect weaves or fancy designs in which the effect noted in the finished cloth resembles the skin of the shark. The cloth is given a substantial finish and it wears very well. High texture is used and the fabric comes chiefly in shades of gray or brown. Ideal for office wear since it is a dressy, conservative material.

The material is also made in rayon, spun rayon and in various blends. This popular fabric which has a rather heavy, semi-crisp texture, is used in men's and women's summer sportswear garments.

SHEPHERD'S CHECK OR PLAID: Used for suitings, cap cloth, coatings, dressgoods, sportswear. Made of cotton, woolen, worsted or rayon. The cloth shows black and white checks or plaids. Other color combinations are used as well. The design resembles the Scotch Shepherd plaid or check. Some of the cloth because of the color combinations used, has the tendency to cause the eyes to "jump" and some people soon tire of the cloth. Conservatice designs however, are much in demand by the trade. There is a wide range of quality and price. In producing the check the warp and filling arrangement is four black and four white, ends and picks. The weave should begin with the "raisers" up in the lower left hand corner of the weave. If this is not adhered to, a straight check will result which is not, strictly speaking, what is known as Shepherd's plaid.

The pattern may be used in particular fabrics made from any of the major fibers. See Overplaid, Glen Urquhart.

SHETLAND: 1. The name should apply only to wool from sheep raised in Shetland Isles off Scotland. Shetland wol, and the fabric made of it, is extremely lightweight and warm. 2. A type of knitting yarn.

SHIRTING: The Anglo-Saxon root means, "short garment." Other early interpretations were "shert" and "split camise." The latter term is now called chemise.

SHODDY: A cloth made of group-up rags in their composition wholly or partly wool. It is an odious term signifying refuse of "shod" or cast off material and such fabric is in general disrepute. Many of the cheaper woolen goods are with economic purpose adulterated with shoddy stock.

SHODDY WOOL: Remanufactured wool fibers are obtained from the garnetting machine treatment which tears apart and shreds the discarded garments fed to the machine. Shoddy comes from woolen, worsted or knitted garments. The shoddy or mungo fibers are mixed with better quality and longer-staple fibers to make up new material to be made ultimately into fabric.

SHORT STAPLE COTTON: In this country any fiber less than 1⅛-inches; in foreign countries the cleavage line is either ⅞-inch or 1-inch.

SLIVER: The term comes from medieval Anglo-Saxon words sleave or slive, meaning to split or slit. Sliver has no twist and is the product of the carding process and drawing process on the cotton system. The term is also used in worsted yarn manufacture on similar operations.

Sliver consists of a continuous rope of parallel fibers of either cotton, wool, rayon, etc., with no twist applied.

SLUBS: Imperfections made by nubs, tufts or little balls of yarn in cloth. They are noticeable and have to be fixed in dry finishing. Slubs are soft in feel, usually because of some slight irregularity.

SLUB YARN: Yarn of any type which is irregular in diameter; may be caused by error, or purposely made with slubs to bring out some desired effect to enhance a material. Slub yarns are popular as novelty threads in summer dressgoods and find much use in hand woven fabrics.

SPINDLE: A long, thin rod that is used on certain textile machines for twisting and holding textile fibers in manipulation from sliver form to spun yarn. This upright device is found on slubbers, roving frames, jack frames, spinning,

"The Vegetable Lamb," was what Sir John Mandeville, in the fourteenth century, called the cotton plant which he found growing in India.

winding and twisting machines. Revolving at a very high rate of speed to perform its work, drawing, twisting and winding, the spindle has a bobbin, tube or cop set around it so that the finished stock may be wound evenly and easily.

The spindle is one of the oldest textile devices known to man. It is driven on machines of today by means of spindle banding which can drive a spindle over 12,000 r.p.m., if needs be.

SPINDLE AND DISTAFF, ERA OF THE: Up to the 14th century, when the spinning wheel made its advent, the spindle and distaff were the only devices used in textiles to make yarn. By their use a yarn could be spun without the aid of a wheel.

The spindle was rotated by the fingers instead of by machinery. The distaff was the staff from which the wol or flax was drawn for action by the spindle.

This method of spinning yarn is still used in the very remote sections of the world that have not been touched by the machine age and the Industrial Revolution. Before the spinning wheel came into use, the world had to accept yarn made in this manner.

SPINNING JENNY: This was the first machine to spin more than one yarn at a time. James Hargreaves worked on this machine from 1754 to 1768 and tradition has it that the machine was named in honor of his wife or "some female." The date of his birth is unknown and he died in 1778. He was a carpenter and weaver of Standhill, near Blackburn, England. He "received the original idea when he saw a one-thread wheel overturned on the floor while both the wheel and the spindle continued to revolve." The spindle had thus been thrown from a horizontal position to an upright position and, if a number of spindles were placed upright and side by side, several threads could be spun at the one time. For his contribution to the Industrial Revolution his home was sacked in 1768 and he fled to Nottingham for refuge.

Hargreaves improved his machine to spin eight yarns and later on increased it to 100 yarns at a time. He did perfect the first practical frame for spinning cotton yarn.

SPINNING LIMIT: The highest commercial count of yarn to which a particular cotton may be spun.

SPINNING MACHINE: 1. Spinning of staple fibers — cap, flyer, mule, ring. 2. Spinning continuous filament yarn — pot and bobbin.

SPINNING ON WOOLEN PRINCIPLE, COTTON: Cotton fiber spun on the woolen system using woolen type roller cards and either ring or mule type woolen spinning frames. Such yarn will resemble woolen yarns in such characteristics as bulk or loftiness, soft woolly hand and the fibers instead of being parallel, as in cotton system spinning, will be criss-crossed in all directions as in the woolen type of yarn. The count or size of such wool-spun cotton yarn will average about 10s cotton count which is 8400 yards to the pound or the equivalent of 5.25 run.

SQUARE CLOTH: A term used for any cloth having the same number of ends as picks per inch, and warp counts the same as the filling — 80 x 80, 64 x 64.

STAPLE: 1. Anglo Saxon word meaning fixed, not variable. 2. Apparel and cloth of a conservative nature as to color, construction, weave, quality and finish. Some fabrics classed as staples are dress worsted, diagonals in blue and black, melton, kersey, beaver, broadcloth, serge, cassimere, chambray, muslin, organdie, poplin, voile, crepe de Chine, georgette, taffeta. These cloths are always in stock since there is a steady demand for these staple fabrics. 3. Cotton is often spoken of as having "good staple." This means that the stock has the necessary working properties for manipulation into a certain size or count of spun yarn. 4. The average length of the bulk of fibers is called staple; a 1¼ inch staple cotton, a 4-inch worsted fiber, a 9-inch woolen fiber. 5. It has been said that the novelty of today is the staple of tomorrow; any cloth has to be accepted by the public to become a good selling staple.

STAPLE COTTON: At times, a misunderstood term. It means the long, good, staple stock, in speaking of cotton from the first-time ginning. It is the choice fiber, ready for manipulation.

The term signifies the average length, of the bulk of fibers, in question. A stock, sliver, slubbing, roving, or yarn, may have a staple length of, say, one and one-quarter inches. The fibers, taken collectively measure that length.

Long staple cotton measures 1⅛ inches, and longer. Short staple cotton is less than 1⅛ inches.

SWATCH: A sample of cloth. In the textile and apparel trades any small sample of material is often referred to by this name.

SYNTHETIC FILAMENTS: May be classed as fibers of indefinite length, and produced in the laboratory. Examples include nylon, Vinyon, rayon acetate rayon, fiberglas, etc. Incidentally, the only true synthetic filaments are nylon and Vinyon, resin in nature.

TEASEL, TEAZEL: A flower head of the fuller's teasel used in the dry finishing of fabric to raise the loose, protruding fibers in material. Teasels produce the nap on many commercial fabrics of today; they are raised in Belgium, Holland, southern France, Oregon; Auburn, New York is the eastern center.

THREADBARE: The appearance of a cloth or garment in which the nap has disappeared, thus showing the foundation yarns to disadvantage.

THREAD SILK: A series of silk filaments which have been reeled and twisted together to add strength to the yarn in order to make the thread suitable for weaving, knitting or sewing purposes. It is neither spun nor weighted. Two-thread indicates two-ply; five-thread, five-ply, etc.

TROPICAL SUITING: Lightweight suiting for men's and women's summer wear. Has various weaves and is made of a variety of fibers. If called tropical worsted, it must be all worsted yarn as to content.

TWEED: A rough-surfaced woolen material with a homespun surface effect. Yarn is usually dyed before weaving, and often woven in two or more colors to obtain some sort of pattern, check or plaid. All wool unless otherwise stated.

TWIST: The number of actual turns of twist per inch in yarn. Twist is mechanically controlled. Also implies the strong firmly twisted silk thread used by tailors.

S-TWIST: The direction of twist in yarn or cord comparable with the spiral portion of the letter "S." Formerly known as left or reverse twist.

Z-TWIST: Comparable with the spiral portion of the letter "Z." Formerly known as right twist.

UNBLEACHED: Refers to cotton or linen materials in the gray or loom condition.

VICUNA: The animal is found at elevations approximating 12,000 feet in the almost inaccessible regions of the high plateau area in Peru, northern Bolivia, and southern Ecuador. Vicuna, which live above the clouds, are about three feet high and weigh from 75 pounds to 100 pounds. The animal has a life span of about 12 years.

The fiber varies from golden-chestnut to deep rich fawn shades to a pallid white beneath the body and on the surface of the extremities with light markings on the face and jaws.

Vicuna fibers, which are strong and resilient, have a marked degree of elasticity and surface cohesion. These fibers are the finest of all known animal fibers, being less than one two-thousandth of an inch in diameter, with a count of about 2500 to the inch which is less than one-half the diameter of the finest sheep's wool. The respective diameters of the two fibers are vicuna, .00043; fine sheep wool, .00080 inches.

The outer beard hair of the animal serves as a coat and is not used in making good quality fabrics. The inner hair, which grows close to the skin on the neck, under shoulders, and on the sides and under-portions of the body, is very soft and silken-like.

Vicuna, the aristocrat of fibers, may be used to best advantage in the natural state; however, proper dyeing does not destroy the original beauty of the fiber itself. However, if dyed, it is necessary because of the tendency of the fibers to resist absorption of dyes to remove at least fifty percent of the natural grease and oil.

Forty fleeces are required to make enough fabric for a single coat.

VIRGIN WOOL: The Federal Trade Commission considers this term synonomous with New Wool. It states that "the term virgin or new wool as descriptive of a wool product or any fiber or part thereof shall not be used when the product or part so described is not composed wholly of new or virgin wool which has never been used, or re-claimed, reworked, reprocessed or reused from any spun, woven, knitted, felted, or manufactured or used product. Products composed of or made from fiber reworked or reclaimed from yarn or clips shall not be described as virgin or new wool, or by terms of similar import, regardless of whether such yarns or clips are new or used or were made of new or reprocessed or reused material."

Another meaning of the term is that it is the first clipping from a sheep that has never heretofore been sheared, a shearling or yearling sheep. The first clip from the animal will be the best obtained, as each successive clip becomes inferior in quality; the older the sheep, the poorer will be the grade of the fiber.

Another concise and brief meaning of the term is that it is wool, irrespective of the clip, that has not been manipulated into yarn and cloth.

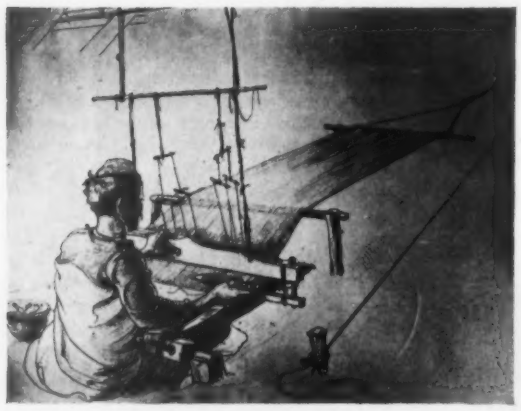
In some respects, the term may be somewhat of a misnomer. Care should be exercised to give the correct impression as to what is meant in speaking of virgin wool. Advertising has done much to add to the confusion in interpreting the correct or implied meaning. Some will say that some grades of virgin wool may cost less per pound than certain good quality cottons; thus, to the buying public the term may be somewhat misleading.

There is also some apparent misunderstanding concerning the term, "100-percent wool." Some will say that when it is considered that wool from the belly, rump and shanks of the animals is used in the manufacture of woolen goods, it can be gleaned that while the resultant garment may be advertised as all-wool or 100-percent wool, the quality may be deficient despite the fact that the cloth may have been made entirely of virgin wool.

Cashmere Shawl Weaving

Gold Braid Market

Ruling Fold Wire For Lace Weaving



Blanket Weaving

The essentials of the weavers' craft are astonishingly identical . . . transcending nations, civilization and historical periods of time.

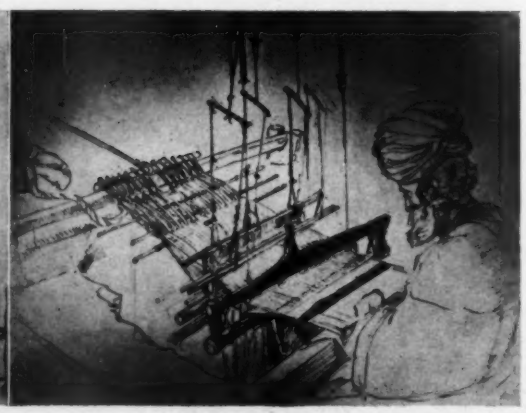
Drawings of 18th and 19th Century India Spinners and Weavers from the Brooklyn Museum.

Contemporary weaver photographed in Scalamandre's Long Island City establishment.

Silk Weaving

Gold Fringe Maker

Carpet Weaving



Silk Weaving

This Commission also defined the following:

REPROCESSED WOOL: The resulting fiber when wool has been woven or felted into a wool product which, without ever having been utilized in any way by the ultimate consumer, subsequently has been made into the fibrous state.

REUSED WOOL: The resulting fiber when wool or reprocessed wool has been spun, woven, knitted, or felted into a wool product which after having been used in any way by the ultimate consumer, subsequently has been made into the fibrous state.

WOOL PRODUCT: Any product, or any portion of a product, which contains, purports to contain, or in any way is represented as containing wool, reprocessed wool, or reused wool.

Wool from the sheep is unique in that it is the only natural fiber that will felt in a natural manner. The fiber is made of overlapping scales or serrations which vary with the several grades of wool; there are from 600 to 3,000 to the inch. The structure of the fiber is comparable with the scales on a fish or an asparagus tip. Wool is warm, springy, elastic, may be harsh. It is the weakest of all major fibers, is a generator of heat thereby giving warmth to the body in cold crisp weather.

There are five general types of wool: fine wools, medium wools, long or luster wools, carpet wools, cross-breed wool. On the four-point method of classifying wool the table includes combing, carding, clothing, carpet wools.

WALE: Ridge or rib in a fabric either knitted or woven (as piqué, corduroy, and hosiery).

WOOL: Strictly speaking, the fibers that grow on the sheep fleece. The Wool Products Labelling Act of 1939, however, decreed that wool "means the fiber from the fleece of the sheep or lamb, or the hair of the Angora or Cashmere goat (and may include the so-called specialty fibers from the hair of the camel, alpaca, llama, and vicuna) which has never been reclaimed from any woven or felted wool product." See Virgin Wool.

WOOL TOP: The continuous sliver form of long, choice woolen fibers which are to be manufactured ultimately into worsted yarn. The combing operation takes out short, immature, undesirable wool fibers from the choice stock, known as noil.

WOOLENS: Cloth made from woolen yarn but not always one hundred percent wool in content. The average woolen has a rather fuzzy surface, does not shine with wear, does not hold the crease, has nap and in the majority of cases, is dyed. Woolen finish is easily recognized on cloths to determine the difference between this cloth and a worsted material.

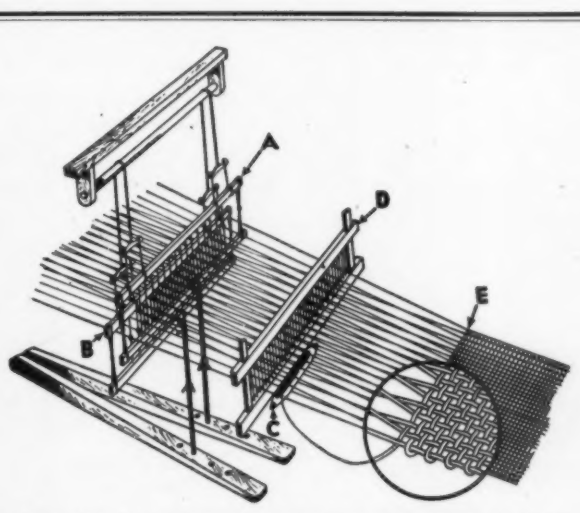
WORSTEDS: Popular class of cloths made of choice woolen stock using fibers of approximately the same length in staple. The process of making worsted cloth originated in the little village of that name in Norfolk County, England. Today, the procedure of making worsted cloth has changed somewhat because of the improvement in up-to-the-minute modern machinery.

The Paris Exposition of 1889 "made" worsteds; it was also at this event that Count Hilaire de Chardonnet showed his first fabric made of what was then known as "artificial silk." Now known as rayon and rayon acetate, the Sesquicentennial Exhibition of 1926 had much to do with fostering the advent of these two man-made fibers which now are household words and articles.

YARN MEASURES, COTTON: 54 inches equals one thread — the circumference of the warp reel. 80 thread equals one lea. 1 lea equals 120 yards. 7 leas equal one hank or 840 yards, the standard yardage for a Number One's cotton yarn. 1 bundle equals 10 pounds.

YARN NUMBERS, COTTON: Cotton yarn is measured in terms of length per unit of weight. No. 1 cotton has 840 yards per pound. No. 10 has 8,400 yards per pound. The count is inversely proportionate to the size of the yarn. Therefore, No. 100 yarn is ten times finer than No. 10, etc.

UNFINISHED WORSTED: Worsted with a slight nap which somewhat obscures the weave. Term is somewhat of a misnomer since this process is a finish on worsteds, ordinarily unfinished after weaving.



ANALYSIS OF PLAIN WEAVE IN SIMPLIFIED SKETCH: Harness (A) controls the odd warp ends. Harness (B) controls the even warp ends. When harness (A) raises the odd ends harness (B) lowers the even ends to form a shed. The shuttle (C) is shot through this shed, leaving a pick in its wake. Harness (A) and (B) return to center point and the reed (D) swinging forward in the lay pushes the pick up to the fell (E) or the cloth. For the next pick harness (A) will go down and harness (B) will rise.

This is the end of a series of three articles on Hand-Loom Weaving in America. Reprints of each part of the article are available at $1 each... complete bound sets of the three parts, $3 each. We request that you enclose payment when ordering copy or copies.

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Fort Sumter Type 140 sheets and pillowcases are now being finished at the new Springs bleachery. We need not tell you about their luster and even yarns, because your own eyes will convince you they are the best. We sent sheets to a major testing company, and had them washed 400 times and abraded 100 times warpwise and 100 times fillingwise. This is equivalent to a generation of constant use. The sheets were still usable, and there was a lot of wear still left in them.

Therefore, if a bride will forego hemstitching and monograms, we can assure her that her grandchildren might sleep on her trousseau sheets.

For a set of 10 SPRINGMAID ads suitable for framing,
send 25 cents to Springs Mills, New York.

ELLIOTT WHITE SPRINGS, *president of The Springs Cotton Mills, has written another book, "Clothes Make the Man," which was indignantly rejected by every editor and publisher who read it. So he had it printed privately and sent it to his friends for Christmas. After they read it, he ran out of friends, so there are some extra copies. It contains a veritable treasury of useless information, such as how to build cotton mills, how to give first aid on Park Avenue, and how to write advertisements.*

If not available at your local bookstore, send a dollar and postage to us.

He has also designed a sport shirt with 16 SPRINGMAID *girls printed in 6 colors on* SPRINGMAID *combed broadcloth. It is made large, medium large, medium, and small. Send us $3, and we will mail you one postpaid in the United States. Or, if you want to make your own, send $2.50 for four yards of material 36 inches wide.*

SPRINGMAID

SPRINGS MILLS

200 Church Street, New York 13, N. Y.

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Hit the happy chord of "Style, Quality and Value"
. . . with Riegel Sport Shirtings for young and old.
FABRICS
FOR EYE APPEAL
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Riegel TEXTILE CORP. • COTTONS AND RAYONS • Spinning, Weaving, Finishing • 342 Madison Avenue, New York 17, N. Y. • ATLANTA, CHICAGO, DALLAS, LOS ANGELES

Bates bold, brilliant woven plaid, a beauty in black and white…all-combed, Sanforized …its extra width allowing, without extravagance, a spectacular sweep of skirt in the dresses you sew for summer evenings. Bates Fabrics, Inc., 80 Worth Street, New York 13

• See Bates sparkling television show, "Girl About Town," starring Kyle MacDonnell. Every Wednesday at 8 P.M. E.S.T. over the entire NBC television network.